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## LECTURES BY M. DE BLAINVILLE ON COMPARATIVE OSTEOLOGY.

THE

### COMPARATIVE OSTEOGRAPHY

OF THE

### *SKELETON AND DENTAR SYSTEM*

IN THE FIVE CLASSES OF

### VERTEBRAL ANIMALS,

RECENT AND FOSSIL.

BY M. H. M. DUCROTAY DE BLAINVILLE,

Member of the Institute of France.

WITH GRAPHIC DELINEATIONS BY M. WERNER;

EDITED (FROM THE FRENCH) AND

### ADDITIONALLY ILLUSTRATED

WITH NUMEROUS NOTES, OBSERVATIONS,

AND DRAWINGS,

BY ROBERT KNOX, M.D.,

*Edinburgh; Corresponding Member of the French Academy of Medicine, &c. &c.*

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### 2. *Of the Principles of the Methodical Distribution of the Primates.*

THE Apes (including under this name the order Primates, and excepting therefrom some singularly anomalous species,) present in the whole of their external and internal organisation so great a number of points of resemblance with man, the chief acts or functions, also, which result from this remarkable and undoubted resemblance, have so great a similitude, that men, the most civilised as well as the most savage, have admitted a real parentage between these animals and the human race. Persons, even who have considered and *called* themselves philosophers, have seen, in the highest Apes, a degenerate man, or, in man, a perfected Ape,—a finished Monkey; imitating in this, the people of Polynesia, who think the Orang-Outan an indolent human being, who will not speak lest he be compelled to labour!

That these animals are *physically* formed upon the same plan as man, is proved by the general form of the trunk, which is much less compressed than in the common quadruped, by the rounded form of the head, articulated with the vertebral column more or less anterior to the posterior extremity of its antero-posterior diameter; by the form and position of the eyes, nostrils, and ears; the perfect freedom of the pectoral extremities, and the form of the instrument (or hand) provided with a thumb, generally opposable; by the form of the pelvian extremities, at least to a certain extent, although they are always less fleshy at their origin, and also in the course of their principal divisions; whilst their termination in an instrument or foot, in reality more resembling a hand than that of the pectoral limbs, distinguishes them clearly from the human species.

This kind of anthropomorphism of the Apes, recognised on a superficial examination of the exterior, is confirmed by the whole of the sensorial, locomotive, digestive, respiratory, circulatory, and even generative systems.

But this apparent resemblance of Apes to man is far from being the same in all the species; and although there exists an immense *hiatus* between the first of the Apes and the most degraded of mankind, this difference comes out more prominently as we descend in the scale.

The more or less elevated position of any species of the Primates, is determined by the following considerations:—

1. The greater size of the head compared with the mass of the body, and especially the cerebral capacity, when compared with the size of the jaws.

2. Its point of articulation in respect to its antero-posterior diameter.

3. The diameter of the vertebral canal is, proportionally, smaller in relation to that of the cerebral cavity.

4. The trunk is less compressed and broader, particularly in its thoracic portion.

5. The forehead is more distinct, elevated, less sloping, contributing to widen the facial angle.

6. The eyes are more anterior, and upon the same plane.

7. The orbits, complete in their circle, are more distinct from the temporal fossæ.

8. The nostrils are less terminal.

9. The ears are not so high at their origin, and the external ear more rounded, and, edged on its upper extremity, extends less beyond the line of the eyes.

10. The lips are thicker, and turned more outwards.

11. The direction of the hair is more separated in its opposing direction, both on the trunk and on the arms, that is to say, from the nucha (back of the head) towards the muzzle, and towards the tail on the trunk, and from the shoulder towards the fingers in the arm, and from the fingers towards the elbow in the forearm.

12. The disposition of the trunk and of the limbs is more favourable for the erect position.

13. The digital prehension is more complete in the hand than in the feet.

14. The dentar system more continuous and less unequal; the incisives more transverse, more vertical; the molars squarer, with blunted tubercles.

15. The collar bones (clavicle) longer, and more perfect.

16. The calcaneum more projecting and more curved downwards in respect to its tuberosity.

By means of this enumeration of peculiarities in the organisation, the place of any species of Primates in reference to man, or the classification of these animals themselves, may be determined.

In respect to position in the series, a *natural* method places them, unquestionably, immediately after man.

The disposing of the species is necessarily determined by the degree of the approach to him; and, therefore, by a consideration of the previous character, it is evident that the series must commence with the Apes, properly so called, who have always opposing thumbs and great toes, nails, more or less flat, and whose dentar system in arrangement and in number resembles the human.

The Sapajous (Cebidæ), or the Apes of the new continent, must follow, in whom the thumb becomes less and less opposable, terminating by altogether ceasing to be opposable; the nails get more and more claw-shaped; the quadruped state of progression becomes more and more habitual, and the dentar system exhibits a farther degradation in the increased number of the anterior molars.

Finally, in the Makis, the opposable thumb scarcely exists, the great toe, on the contrary, becoming opposable, as the nails, even where they are flat, have always a sharp point; the tarsus rises in walking, and the dentar system, always more or less anomalous, has never the peculiarities of the human; and, in fact, if the Chimpanzée be the nearest to man, the Makis are nearest to the Carnivora, and especially to the Insectivora. In short, they are altogether qradrupeds; their station is horizontal, and their nostrils are terminal, extending beyond the mouth, as in dogs.

When once the principal of the arrangement of the three great families or genera which constitute the order is recognised and admitted, the same may be employed advantageously in arranging the component species of each family.

At the head of the Apes stand the Chimpanzées, Orang-Outan, and Gibbon, having the chest and sternum closely resembling man, the more human proportion of the limbs entitling the Chimpanzée to the first place.

Then follow the Soulilis and the Semnopitheci, which are truly Guenons, with a long tail, short face, and slender limbs; then the Guenons (see fig. 2, vol. i., 1839-40, p. 298), properly so called, whose limbs shorten as their muzzle and canine teeth lengthen; then the Macaques, in which these characters are still more strongly marked, the tail at the same time shortening so as finally to almost disappear, as in the Magots. Lastly, the Baboons,* whose nostrils are strictly terminal, and in whom these peculiarities reach their maximum.

The Cebidæ may be arranged with equal ease by attending to the thumb and form of the nails, and even to the arrangement of the incisive teeth, to the number of the molars, and to the prehensile or non-prehensile tail.

At the head of this order stand the howling Sapajous, although the facial angle diminishes in consequence of the development which the hyoid bones acquire with age; next follow the Sagouins, which have the dentar system of the Alouates, but whose tail, though prehensile, is not naked; next follow the Ateles and the Sajous, whose dentar system assumes the normal form of the Primates of America, and whose last molar is evidently the smallest, the incisive teeth becoming more and more sloping. We proceed thus from the Douroucoulis to the Sakis, characterising them by the consideration of the prehensile or non-prehensile tail, naked or not, and by the development of the thumb; and from these considerations have arisen the sub-divisions recently established by zoologists.

Finally, the family is terminated by those species in which neither thumb nor great toe is opposable, which have claws instead of nails (with the exception of the great toe), whose tarsus becomes long and narrow, and whose incisive teeth slope decidedly; and in this group, the lowest species, viz., the Ouistitis, properly so called, have even the nostrils sub-terminal.

The family of the Makis may, from a con-

* Baboon of the Cape, fig. 28, vol. ii., 1839-40, p. 322.

sideration of the digital apparatus, be arranged as well, and even better, than that of the Sapajous; the hand and foot are still nearly quadrumanous in the highest species, and are no longer so in the last, which have the fingers sub-equal, and instead of nails have true claws, as in the Galeopitheci.

The order to establish in the first section (the most numerous) is readily taken from the dentar system; this is at first the most normal possible in this group (Makis), in which, however, it is always more or less anomalous, by the existence of three kinds of teeth, quite distinct, as in the Makis, properly so called, in whom the incisive teeth are the nearest to what exists in the Ouistitis; the Indris must come after, and the Aye-Aye last of all, as being the most anomalous.

Amongst the Makis, keeping in view the number and disposition of the teeth, and especially of the incisives, we are enabled to place, *first*, the species without tails, as the Loris; *next*, the species with very long tails, and long legs and ears, the Makis, properly so called, the Galagos and the Tarsiers; and, *lastly*, the Indris.

The animals most difficult of arrangement amongst the Primates, are not the Cheiromys or the Aye-Aye, nor even the Galeopithecus, however anomalous they may appear; since, in fact, the first is a real Maki, both externally and internally, with the single exception of its anomalous dentar system; and the second (Galeopithecus) is also easily arranged with the same family from a consideration of the whole of its organisation, proving it to be the lowest of the Primates, and the passage to the suborder Cheiropteres or Bats, commencing the Secundates; but it is more difficult to show the natural relations of the Sloths, so anomalous in almost every part of their organisation, with the Simiadæ and the Cebidæ. The zoologists, who first knew these singular animals, placed them without any hesitation amongst the Primates, establishing the genus *Bradypus*, and viewing them as Anthropomorphine; but misled afterwards by considerations of the incisive dentar system, they included them amongst the *Bruta*; and this was imitated pretty nearly by those zoologists who classed them with the Edentata. With all this, a consideration of the form and proportions of the trunk, almost without a tail,—the broad chest, depressed more than compressed,—the form of the head, whose cerebral cavity is so much larger than that of the face, in consequence of the shortness of the jaws,—the form and proportion of the limbs, the pectoral so much longer than the pelvian,—the mobility of the hands and feet both equally prehensile, although in a different way from the Simiadæ and Cebidæ; lastly, the position and number of the Mammæ: all these considerations induce us to place the Sloths, without the least hesitation, with the Primates, in which we have been followed by Wagler, and to consider them as an anomaly still more curious than that of the Ateles at the commencement or the end of the Cebidæ. In this way, as appears to me, we disturb less the natural relations, than if we placed them (the Sloths) between the Makis and Galeopitheci; and, in fact, these animals are exclusively Phytophagous, like the first of the Sapajous; they might even be included with the Sapajous themselves, by the side of, and as an anomaly of the Ateles, or between the Sapajous, properly so called, and the Ouistitis as Wagler did; but in brief, this is a question which we have considered in a separate fasciculus by reason of its difficulties.

If now we desire to arrive at the principles of distinction of the species of Primates, this cannot be easily done, merely by looking to the hair and colour, because, in this respect, the limits of variation are very loose, according to the age, sex, and localities; but this may be easily attained, by considering the proportion and form of the ears, tail, limbs, and their constituent parts, and with still more certainty by the study of some peculiarities in their skeleton and dentar system, whose differential shades may be easily read, in the appearances of the incisive and canine teeth, the first anterior molar, and especially the last superior and inferior molars; in the development of the heel terminating the inferior posterior molar behind, which may be either more or less wanting, or rudimentary, or more or less developed, and in this case simple or divided into lobes at its circumference. But in order to use with certainty the dentar system as a specific element, the greatest attention must be paid to the changes which it experiences with age, already pointed out in our odontography.

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## COURSE OF LECTURES

ON THE

## PHYSIOLOGY AND PATHOLOGY OF THE BLOOD,

AND

THE OTHER ANIMAL FLUIDS,

DELIVERED IN THE SESSION OF 1839-40,

AT THE

*School of Anatomy adjoining St. George's Hospital.*

By HENRY ANCELL, Esq., Surgeon.

### Lecture XX.

*Hæmatitis continued; causes; symptoms; post-mortem appearances.—Viscidity of blood.—Fibrinous concretions in the heart and blood-vessels; varieties; causes; their formation during life; organisation; effects.—Softened fibrin.—Pyohæmia of M. Piorry.—Pus; analysis of; analogy between pus and*

***blood; differential characters of pus and mucus; puriform mucus; conversion of pus into mucus; relations between pus, mucus, and the state of the blood.—New proof of the existence of pus in the blood.—Causes, symptoms, and consequences of pyohæmia.***

GENTLEMEN:—That state of the blood which is called inflammation, with as great, if not with greater propriety, than any special condition of any solid part or tissue, may occur in either sex, in any constitution, or at any age, and is met with in all climates.

Its *causes*, according to M. Piorry, are those of inflammation in general. Increased circulation of blood alone, rarely, if ever, produces it. The following are its most direct causes. Great losses of serum, or of the water of the blood, produced by great heat or in any other way, and followed immediately by a sudden chill. Cold applied suddenly to the stomach while the surface is perspiring. Excesses in diet, and particularly in alcoholic fluids. Probably too small a proportion of diluting drinks. Modifications in the air respired. Wounds, surgical operations, specific diseases, inflammations, and other affections of the organs, parts, and tissues, and epidemical influences, the action of which has been little investigated.

Its symptoms are frequently preceded by those of general hyperæmia; but in many instances, and especially from the operation of the above causes, its proper characteristics are more immediately developed; when once completely formed, they are for the most part the symptoms of inflammatory or of ardent fever. In some cases no special local complication whatever occurs, and the disease is ephemeral. When local disease supervenes, it generally commences within twenty-four or forty-eight hours, but sometimes not until after several days.

With respect to inflammation of the blood and local inflammation, sometimes the one and sometimes the other is primary. There are two series of facts which establish this, and might at first sight appear to contradict each other. The one exemplifies inflammation of the blood as the primary disease, and the other local inflammation as such. The facts are reconciled by keeping in view the intimate relation between the blood and the organs, since there is no reason why modifications of the vitality of the blood should not be propagated to the organs, just as modifications of the vitality of the organs are propagated to the blood, or those of the different organs and tissues to each other. M. Piorry refers to ninety-eight cases, in which all simple inflammations of the blood without local inflammations, and all local inflammations without a general affection, were excluded. In sixty-one of these cases, inflammation of the blood preceded or coexisted at the commencement of the local affection. In thirty-seven cases the local inflammation appeared to be primary. But since the latter rested in great part upon the representations of the patients themselves, there was every reason to believe that if they had been noted from the commencement, the proportion of cases in which there was a pre-existing morbid state of the blood, would have been greater.

Whether primary or secondary, the inflammatory state of the blood becomes an important complication, and a true source of therapeutical indications. When a local inflammation is complicated with it, M. Piorry employs terms to designate this complication, as *Hæmo-arthritis* (inflammation of the blood and joints), for acute rheumatism; *Hæmo-pneumonitis*, for inflammation of the lungs and inflammatory fever. I care nothing about these terms, they may be adopted or not, that is of minor importance. My great anxiety at the present time, is to bring conviction home to your minds, as it has reached mine, that, as regards the diseases daily under your eye, there can be no correct *pathology, general* or *special*, which does not take into consideration the state of the living BLOOD.

There is no difficulty whatever in comprehending how an inflamed state of the blood should produce pneumonia, pleurisy, pericarditis, peritonitis, and various other local affections. We can easily understand how the altered state of the liquor sanguinis would interfere with its own circulation in the extreme textures. The case of pneumonia is illustrated in TABLE XXIII., 12, 13, 14, 56, &c.; and the whole subject, by reference to those chemical, physical, and vital properties, which have been laid before you.

But there is one quality of the blood, the modification of which has been more particularly insisted upon, as a cause of local congestions and inflammations. I allude to its viscidity. The blood was in the first instance described as a viscid fluid, and this quality is indispensable for its free circulation. It is attributable to the organic matter in the liquor sanguinis. Its importance is illustrated in the fact, that pure water will not enter tubes of extremely small calibre, by the exertion of any degree of force; but if a quantity of gum, or any mucilaginous substance be mixed with it, such tubes may then be easily injected. The same principle, like almost every principle in nature, is in operation in the living system; and whether the blood lose its natural viscidity, or become inordinately viscid, its passage through the capillary system may be rendered thereby impossible. TABLE XXIII. amply illustrates the effect of increased viscidity of blood obstructing the capillary tubes:—"The circulation ceases in consequence of the affinity between the molecules of the

blood being too great, and these molecules adhering to the walls of the vessels and impeding the course of the fluid." Hence diseases from excessive viscidity, and, as already shown, many substances are capable of producing it. No doubt, in some individuals, this state of blood occurs daily, where the serum is turbid from excess of animal matter (Lecture VIII). It is caused by errors of diet, and it constitutes a predisposition to local attacks. In prolonged inanition the blood loses its aqueous part, and becomes more viscid. Alkalies, on the contrary, render it excessively liquid (TABLE XXIII., 23, 24, 25), and thus become a cause of obstructions of a totally opposite nature. The calibre and the arrangement of the capillary vessels varying in different organs, if the liquor sanguinis in a morbid state, as respects its viscidity, be supposed capable of traversing one set of tubes, it may be arrested in another set of greater tenuity; and, in consequence of such obstruction, extravasation of blood, or of liquor sanguinis, or effusions of aqueous fluid, or of serum of various qualities, must inevitably occur.

The excess of albumen, or the excess of fibrin formed at the expense of the albumen, in inflamed blood, shows that the quantity of highly animalised matter in the liquor sanguinis has been increased; and this circumstance, taken with several others which have been pointed out, indicates an increase in its viscidity. I take this to be the "inflammatory spissitude," which Boerhaave laid down as a predisposing cause, of a pleurisy, for instance. Hence we find Andral reverting to the doctrines of this celebrated man, in his opinion that a great number of inflammatory congestions are to be accounted for by a thickened condition of the blood, rendering it incapable of passing through the smaller vessels. But there are other circumstances, in an inflamed state of the blood, to be considered, and two in particular, which would appear to have a tendency opposed to that of its increased viscidity. Its high temperature increases its tenuity, and promotes the rapidity of its circulation; and since alkalies dissolve it, as it were, and render it thinner, its duplex proportion of soda, if it really occur, must have an effect of this kind, however slight. Now these facts are well calculated to explain many seemingly anomalous circumstances, respecting the occurrence of local affections in some organs rather than in others, when the blood is inflamed. Circumstances which, in truth, have been the greatest obstacles to a just and comprehensive view of the relations which subsist between the blood and the organs in inflammation. Considering the function of the lungs, and the large augmented quantity of blood which must pass through them when that fluid is inflamed, we do not wonder that pneumonia is one frequent consequence. But considering, also, the diminished temperature of the blood, as it traverses the capillaries at a distance from the heart, we see ample reason why the evil consequences of its inflammatory spissitude should be felt in the fibrous membranes, particularly of the joints; and that an acute rheumatism should be a much more frequent consequence of an inflammation of the blood than a pneumonia. If the subject were fully developed, we should in this way, perhaps, learn the specific characters of these different affections. The great irritability of the heart, with its great power of contraction, explains why inflamed blood circulates with impunity through the coronary vessels, and the extreme rarity of true carditis.

That view appears to me to be extremely narrow and unsatisfactory, which regards the viscidity of the blood *per se*. It should never be forgotten that the blood is a vital fluid, and that an inflammation of it implies an increase of its vital powers, as measured by its vital actions. Do not mistake in imagining that I place the chemical facts before you, as absolutely and incontrovertibly determined. Their importance to the human race is such, that nothing could be more rash than to receive and adopt them without sufficient proof. What I do say is, that they should be submitted to the closest investigation by those who are favoured with the necessary opportunities; and what I again ask you to believe is, that no pathological doctrine can be perfect, or even true, which does not take into due consideration the state of the blood, as a quantity known or unknown.

*Post-mortem.*—When the blood has been inflamed during life, whether the affection were primary or secondary, the most usual post-mortem appearances are, serous and fibrinous effusions, false membranes, and fibrinous clots. The blood is principally remarkable for the great number of buffy clots which it contains, frequently constituting false polypi in the heart and vessels, which differ in no respect from the buffy coat already so fully described. The tendency in inflamed blood to form false membranes during life, corresponds also with the buffy coat in blood drawn from a vein, as exemplified in croup. So also we have deposits of fibrin in iritis and on blistered surfaces; and fibrinous effusions are found after death, and albuminous fluids either with or without fibrin, in the serous and synovial cavities, as in arachnitis, pericarditis, peritonitis, and the like. The liquor sanguinis, and frequently the red corpuscles, become extravasated, as exemplified in pneumonia, where this occurs both in the parenchyma and the air-vesicles, constituting hepatisation or induration, softening, and with some modification in its passage through the parietes of the vessels, various

kinds of sputa, with numerous other pathological conditions. In many instances the fibrin, as might, *à priori*, have been expected, has the greatest possible tendency to maintain its organisation: in Magendie's language its arborisations are converted into pseudo-membranes, and these false membranes become caniculated, forming vessels permeable in their turn by the liquid that produced them, and of which they originally helped to constitute the substance. But since some of these post-mortem appearances, like the buffy coat itself, occur under other circumstances besides inflammation, it will be necessary to call your attention to them specially; and I cannot introduce what follows more appropriately than upon the present occasion.

*Fibrinous Concretions in the Heart and Blood-vessels.*—There is, perhaps, no subject in pathology which has excited more discussion, and upon which greater differences of opinion have prevailed, than respecting these concretions, so frequently found in the heart and blood-vessels after death. They were originally confounded with true polypi or fleshy excrescences; but Morgagni pointed out distinctly, that they are formed of the same substance as the buffy coat, and that they frequently occur during life, stating his belief that they may commence to form in protracted syncope. Of the exclusive solidists, some have peremptorily denied that they are, at any time, more or less than cadaveric productions; others, it is true, have admitted that they may take place a short time before death, and that in some cases they are even sufficient to account for that event. But instances recorded by Haller, Corvisart, Laennec, Andral, Hope, Hughes, Thackrah, &c., fully confirm the opinions of Morgagni; and every day's experience, as it appears to me, illustrates the important pathological fact, that in states of disease, the living blood may coagulate within its vessels, not only shortly, but even a long period before a fatal event. Dr. Wilson has met with cases in St. George's Hospital, which fully bear out this statement; and in Dr. Bright's hospital reports, there are cases given, in which the formation of coagula was distinctly observed in the jugular and subclavian veins, commencing ten or twelve days before death.

A case is described in the 52nd volume of the "Edinburgh Medical and Surgical Journal," which well illustrates this point. The basilic vein was felt as a hard resisting cord filled with clots, which could be pushed from one part to the other. On opening it for the purpose of bleeding, "a solid greyish white perfectly organised clot, of an inch and a half in length, was pressed out." The woman died dropsical, about six weeks after the commencement of this appearance; and on inspection it was found that all the veins of the left arm, those of the inferior extremities and of the feet, both superficial and deep, were filled with a clot which represented exactly the vessels and their dimensions. This clot was formed of fibrin, deposited in concentric layers, more coloured at the centre than at the circumference. There was no adhesion between it and the internal membrane of the veins; and the latter presented their normal appearance, being smooth and polished. In the left femoral vein portions were softer than the rest, and of a redder colour, but the coats of the vessel were still natural. The vena cava and the aorta were filled with clotted blood, and the liver and stomach were greatly diseased.

The blood then may coagulate in its vessels during life; but this coagulation takes place, most frequently perhaps, in the heart, and there forms what are so familiar to us as false polypi. These differ greatly in appearance. In colour they may be red, white, red externally and white internally, or *vice versâ*. Their consistency may be firm or soft. They may occur in either or both of the auricles and ventricles, and also in the large blood-vessels: they may be loose or attached to the lining membrane; if attached, this varies greatly in extent and degree, and they present great differences in shape and size: hence Dr. Hughes has described them as *polypoid*, *massive*, *parietal*, and *globular*.

Such varieties of appearance indicate, as a general principle, that these fibrinous concretions, whether in the heart or elsewhere, are liable to occur at variable periods anterior to death. But there are still more instructive facts relating to them. They have been found extremely vascular, covered with membrane, and interspersed with spiculæ of bone. "Sometimes they are bloodshot, from entangled red corpuscles, having the appearance of being inflamed." Mr. J. Stewart has described cases of highly vascular polypi in the auricles and ventricles. Dr. Davy records the fact, that in one instance serum was collected in the interior of one of these masses, the inner portion being soft, the outer firm. Andral states that he has repeatedly found collections of pus, or of serous fluid, in their centre; and in one instance a semi-calcareous concretion, which appeared to result from a morbid secretion accomplished in the interior of the coagulum. Sometimes they have the appearance of abscesses, and contain, as it were in a sac, a puriform matter. They may float loose in different cavities, without any attachment whatever, and yet present traces of organisation; although in such cases it may still be a question whether they have been previously attached. These appearances are altogether inconsistent either with their formation *in extremis*, or at a very short period before death; and they teach us that the vital or organising principle is at

play, in fibrin deposited in the liquor sanguinis, whether that takes place within or without the vessels.

With respect to the puriform matter spoken of, Mr. Gulliver has recently published his opinion, that it differs from pus. He describes it as a pulpy, creamy fluid, resembling pus in colour and consistency, and in the facility with which it is miscible with water; but under the microscope it is seen to be loaded with particles extremely variable in size and form, some very dense, others flaky, and larger than pus globules; but the greater number smaller, extremely irregular in shape, not all globular like pus, but consisting of very minutely granular masses, and a few rounded particles; the fluid itself is not iridescent, when viewed by transmitted light, according to Dr. Young's plan; acetic acid, for the most part, dissolves its particles, and they swell and become indefinite by the action of sulphuric acid, and the fluid is not rendered ropy by ammonia or its hydrochlorate. There may be a few blood corpuscles blended, and, in consequence, if inflammation set up in the neighbourhood, there may be an admixture of true pus; but the fluid in question is *softened fibrin*, and may be formed artificially by the concoction of fibrin taken from the heart, and tied in a piece of intestine, then placed in a water-bath, and kept at blood-heat for about forty-three hours.

Mr. Wardrop speaks of a distinct abscess in the centre of a polypus concretion in the left ventricle; and whether all those cases which occur depend upon the softening of fibrin as just described is uncertain, nor does it effect the general bearing of this subject. Mr. Gulliver believes that a low state of vitality is favourable to the softening of coagula; and he justly remarks, "the course and effects of the coagulation of blood in the heart and vessels during life, and the connection of the phenomena with disease, as well as the changes to which the clot becomes liable, and the effects of the mixture of the softened fibrin with the circulating blood, are all subjects full of interest and importance requiring further investigation."

There can be no doubt that the sudden coagulation of blood in the heart is occasionally a cause of rapid, or nearly instantaneous death. The symptoms produced are, increasedly irregular and confused actions of the heart, sudden and excessive aggravation of dyspnœa without obvious cause, agony from an intolerable sense of suffocation, cool surface and extremities, livid countenance, occasionally nausea and vomiting, restlessness and distress, till death. Sometimes, however, there are no symptoms, and again polypi may cause instant death, by suddenly blocking up one of the apertures of the heart.

When coagula are large and soft, and when found in the heart, the aorta or vena cava containing a fluid in which there is no fibrin at all, they are generally post-mortem productions; but when they adhere firmly to the heart, and the membrane from which they are detached is found to be rough, vascular, and sprinkled with bloody spots—when a firm, white, fibrinous mass is found in one of the cavities, entirely detached from a dark-purple or mixed coagulum, filling up the remainder of the same cavity—when a coagulum of blood has behind it a smooth unbroken layer of fibrin attached to the cavity in which it was lodged—when changes, the result of organisation or degeneration are observed in the concretion, and are absent in other coagula in the same heart, then, as described by Dr. Hughes (the most recent writer on the subject), and, probably, in many other cases, it is an incontrovertible fact that the blood has coagulated during life.

It appears to me that a futile attempt has constantly been made, founded upon inadequate ideas of the nature and habits of the blood, to account for its coagulation during life upon one general principle. There can be little doubt that it depends upon various causes. It has been stated that the coagula are most commonly found in persons who are long in dying, and that previous depletion favours their formation. Dr. Davy records numerous cases of the veins being obstructed by coagula in subjects who had long suffered from chronic maladies, great prostration of vital power, and languor of circulation during the last days of existence. In Dr. Bright's cases we find the blood coagulating during life in a female who had suffered from excessive uterine hæmorrhage, and in a dropsical girl of 17, and a child of 20 months, in both after acute illnesses. Looking at the cases on record, they leave no doubt that a state of debility, depending upon a morbid condition of the blood, predisposes to this its coagulation; but I cannot think that a retardation of the blood in its course is in general the efficient cause of this vital act taking place, contrary to the course of nature within the vessels. I must beg of you to refer to TABLE XV. (35, *et seq.*), and you will there find that many substances, mixed with the blood in the minutest portions, promote its rapid coagulation. More especially infinitessimal quantities of various salts will hasten this process. A great excess of serum has the same effect, TABLE XII., 37. In the state of debility in question, it is more than probable that a true state of hydrohæmia exists. We know, also, that loss of blood augments the proportion of water in that which remains, and renders it more rapidly coagulable, TABLE XVII. The state of debility, then, in the patients above alluded to, is a state in which the blood is predisposed to coagulate, and a slight change in its saline constitution may

well be supposed to produce its actual coagulation.

But your attention was called to this subject in consequence of these fibrinous concretions having been enumerated among the post-mortem appearances of hæmatitis. Here the effect takes place under totally different circumstances. These concretions have so frequently been coincident with endocarditis and chronic maladies of the heart, that Keysig regarded them as the products of inflammation of the lining membrane; an opinion which has proved extremely convenient to those who treat the notion of morbid states of the blood with ridicule. It cannot be denied that fibrin, being deposited by the vasa vasorum of an inflamed vein into the interior of the vessel, might originate the formation of coagula, and favour their growth by retardation and otherwise; but in a majority of instances there is no evidence whatever of such a local inflammation. In hæmatitis, the natural vital actions of the blood are augmented, the state of the liquor sanguinis is such, that both within and without its vessels it is too prone to organisation; its coagulation in this instance may be regarded as an act of supererogation. Thus the firm contracted buffy coat, the firm coagula in the heart and blood-vessels, false membranes and bands of adhesion, effusion of fibrin in the direction of the coronary vessels in pericarditis, and in the direction of the vessels on the surface of the brain in arachnitis, hepatisation of the lungs, and induration of other parts, "illustrate each other," and have one common origin—an inflammation of the blood. Does not this strike every one who thinks at all on the subject as the common-sense view of the matter? In this instance, the predisposition consists of a state of liquor sanguinis which furnishes an augmented quantity of fibrin; but here, also, we believe it to be a fact, that changes take place in the saline constitution of the blood, and it is highly probable that these changes again have something to do with its coagulation. The matter of a hepatised lung undergoing softening, examined microscopically, was found very similar to the matter into which a fibrinous concretion is converted in the ventricles of the heart or in a vein.

These are not the only circumstances under which the blood is liable to become coagulated in its vessels during life. The blood being healthy in its constitution, any production, accidentally developed in the heart or vessels, may cause the coagulation of fibrin. Spiculæ of bone projecting into the cavities of arteries, have been found with pediculated masses of fibrin appended to them, and coagula have been produced experimentally around meshes of thread introduced and allowed to remain in an artery. The deposition of fibrin in layers is connected both with a retardation of blood and the disease of a vessel in *aneurism*. Fibrin is the basis of the coagulum that obliterates divided arteries and veins, and of cicatrices. It is deposited in layers on the surface of solidifying wounds. Fibrin is the basis of all those morbid productions that present traces of organisation; and Andral remarks, that here it "comes under the class of morbid secretions presenting traces of organisation, the most simple of which is a particle of pure fibrin coagulated in the blood-vessels, or extravasated in the surrounding tissues:" he compares this vitality to zoophytic existence, in which animals are composed only of an amorphous gelatinous mass; and we see in the history of fibrin, an almost simple gradation from a simple clot to a *strongylus* or *ascaris*. Fibrin is found also in vessels passing through or near inflamed or malignant tumours, and in vessels crossing phthisical cavities. Andral is convinced that severe solid tumours of the liver, which have been called cancerous, are composed of solid fibrin, accumulated in the minute ramifications of the vena portæ. He has also observed such a coagulation in the emulgent vein; "a fibrinous concretion of a dirty white colour filled the vein, and adhered strongly to the parietes; it was prolonged into its subdivisions, and might be traced into its minutest ramifications, even into those parts where, before the dissection, nothing could be distinguished but masses of a dirty white or pale red colour, which has been called encephaloid tissue in a state of crudity. He believes it to form the basis of scirrhus and of different varieties of sarcoma and fungus hæmatodes." Here, again, the salts of the blood probably play an important part.

This is a short chapter in the history of fibrin, the most highly vitalised principle of the blood. Derived from that blood, aloof from which systems of physic have been framed; with the bare mention of which courses of lectures have been delivered *ex cathedrâ*, on the practice, forsooth, of physic. You will, I doubt not, see the truth of an observation made by Dr. Wilson, "that an undue tendency of the blood to coagulate, without actual coagulation, is a most important state of disease." Whether the result of hæmatitis, hydrohæmia, retardation, stagnation, or some modification of its saline constitution, this state of disease is unquestionably attended by symptoms, and ought to be a legitimate object of treatment; and the importance of this observation will forcibly occur to you, if you bear in mind that its actual coagulation, in the shape of polypi in the circulating organ, membrane in croup, effusions, depositions, and morbid growths, is among the most frequent causes both of sudden and of lingering death.

Pyohæmia, or a purulent state or tendency of the blood, is a subject closely connected with hæmatitis. I must now, therefore, de-

scribe what is called *pus*, a morbid secretion, the result of inflammation, whether you apply that term to the minute molecular actions of the blood itself, or limit it to the grosser vascular actions in the more solid structures.

*Pus*, when *laudable*, as it is termed, differs only slightly in whatever part of the body it may be secreted from the blood. It has a creamy consistence, a yellowish colour, sweetish taste, a faint, peculiar odour, and under the microscope exhibits the appearance of globules with smaller molecules of unequal size (Table XXI., 21,) diffused through a fluid. It is generally represented as neutral, becoming slightly acid on exposure to the air; but more recent experiments intimate, that in many instances it is slightly acid from the first. Its opacity and degree of consistency depend in a great measure upon the quantity of globules which it contains, and its specific gravity varies from about 1.030 to 1.040.

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### Table XXVIII.

*Analysis of Pus from a Psoas Abscess, sp. gr. 1.0409, by Dr. G. Bird.**

| | |
|---|---|
| Water | 898.0 |
| Albumen | 75.75 |
| Aqueous extract (alkaline lactates) | 8.0 |
| Fatty matter | 5.0 |
| Chloride of sodium<br>——— potassium<br>Alkaline carbonates | 5.75 |
| Phosphate of lime<br>——— iron<br>(with oxide of iron) | 7.50 |
| | 1000.0 |

This analysis agrees very closely with one made by Schwilgué, and adopted very generally on the continent. The analogy between pus and blood has been remarked from the earliest times, and these analyses fully confirm it. Pringle found that blood exposed to a moderate degree of heat becomes turbid before being fœtid, and deposited a white purulent matter; and he was of opinion that pus in an ulcer is formed in a similar manner. Gaber tied a quantity of blood in a bladder, and, exposing it to blood heat, found a purulent matter transuding through its pores. Gendrin and Donné conclude, from a number of ingenious experiments, that pus is nothing more or less than blood transformed. Pus, in fact, resembles blood in being composed of an aqueous solution of albumen, in containing certain salts, fatty matters, and a large proportion of iron; but it holds in suspension the pus globule, composed of insoluble albumen, or of a substance analogous to it, instead of the blood corpuscle, the nuclei of which is most probably composed of a similar substance, and pus differs from blood in the absence of fibrin and of hematosine.

Every circumstance at present before us is in favour of the opinion, that pus is secreted from the blood in the form of a clear fluid, and that its globules are formed afterwards. Autenreith states, that if some of the watery moisture which exudes from an inflamed surface after the pus has been removed be collected between two transparent thin pieces of talc, and allowed to lie in the wound, globules are seen to form gradually in it, to enlarge and become opaque; but if the fluid be removed altogether from the atmosphere of the living textures, no such change takes place in it. Several observers also affirm, that when a suppurating surface has been washed clean, the pus may be seen to be secreted as a clear fluid, which afterwards becomes thick and opaque. Again, the size of the pus globule, its diameter being nearly double that of the blood corpuscle, indicates that it cannot transude in either direction through the parietes of the blood-vessels; and the existence of a solution of continuity in the vessels of a suppurating part, so far as we can judge by the evidence, is an accidental and not an essential circumstance. These facts are by no means inconsistent with the views of Raspail and Henle, to which your attention was directed in Lecture XIV, who regard both pus and mucus as secreted fluids containing the cells of epithelium. Now the exertion of the self-same force, whatever it may be, which produces cells from nuclei and nucleoli, in the material transuded from blood through its vessels in a state of health, may well be supposed to produce the globules of pus and mucus in the modified material, which proceeds from inflamed blood in an inflamed part.

The relations of pus and mucus to each other constitute an important part of the history of pus; I therefore now place before you the following table, constructed chiefly from a paper by Dr. Golding Bird:—

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* M. Mandl, in a recent article in the "Gazette Médicale," passes over entirely the investigations of Mr. Gulliver, and also those of Drs. Golding Bird and Babington, perhaps the most important which have yet been published in pathological chemistry, although I have reason to believe that he was fully acquainted with them.

TABLE XXIX.

*Differential Characters of Pus and Mucus in their well-marked Forms.*

| *Pus from an Empyema.* | *Mucus from simple Bronchitis.* |
|---|---|
| 1. A nearly homogeneous, greenish-yellow, greasy fluid. | 1. A nearly limpid glairy fluid. |
| 2. *Globules.* — As described in Lecture XIV. | 2. *Globules.* — As described in Lecture XIV. |
| 3. *Heat.*—Coagulates its albumen. | 3. *Heat.*—Does not coagulate, even on boiling in a test tube; but on prolonging the ebullition, a milkiness and an insoluble opaque deposit ensues, which consists of albumen in amorphous particles. |
| 4. *Distilled Water.*—Mixed, then filtered, a limpid solution of albumen passes through, coagulable by heat, resembling dilute serum of blood. The insoluble matter on the filter containing the globules of coagulated albumen. | 4. *Distilled Water.* — Not soluble, nor easily miscible. Inspissated mucus swells in it. |
| 5. *Sulphuric Acid* forms a pale reddish solution, which, on dilution with water, becomes white and turbid, resembling a mere mixture of pus and water. | 5. *Sulphuric Acid.*—A reddish-brown solution, which, by dilution with water, loses its colour, and becomes quite transparent. |
| 6. *Nitric Acid.*—With the aid of heat dissolves it, and forms a clear lemon-yellow solution, becoming orange-red with an alkali. | 6. *Nitric Acid.*—Appears at first to coagulate it, rendering it yellow in patches, and, by the assistance of heat, forms a pale-yellow solution, becoming brown on the addition of an alkali. |
| 7. *Hydrochloric Acid* partly dissolves it, causing the whole to assume a pale *blue* tint; and in a few minutes a lilac deposit, which, under the microscope, appears to consist of masses with rounded edges, apparently composed of numerous contracted globules. | 7. *Hydrochloric Acid* removes the slight turbidity it previously possessed, and causes it to assume a *lilac* tint. |
| 8. *Acetic Acid* mixes with it like water, forming a milky or creamy fluid. | 8. *Acetic Acid* produces a partial coagulation, causing the mucus to assume an appearance, quite peculiar, of a *corrugated membrane* floating in the acid. |
| 9. *Ammonia.*—No immediate effect, but, after agitation for a few seconds, forms a semitransparent gelatinous mass. Its hydrochlorate in concentrated solution forms with pus a remarkable viscid compound. | 9. *Ammonia*, by the assistance of heat, partly dissolves it, forming a gelatinous solution, becoming turbid when diluted with water. |
| 10. *Incineration.*—The insoluble residue on the filter, in the experiment with distilled water, furnishes a *red ash*, with a large quantity of *iron*. The quantity of saline matter in the dry extract much *less* than in mucus. | 10. *Incineration* yields a *white ash*, containing an alkaline carbonate, and destitute of all traces of iron. The quantity of saline matter in the dry extract much *greater* than in pus. |
| 11. *Spontaneous Changes.*—Has a remarkable faculty of resisting putrefaction. If free from impurities, will continue sweet for weeks, and even months. | 11. *Spontaneous Changes.*—In a few days from exposure to air lets fall a *white cream-like deposit*, the whole becoming like the opaque mucus of chronic bronchitis. The deposit presents under the microscope roundish particles of coagulated albumen. This change takes place also in hydrogen gas. |

With respect to the pus globules, Mr. Gulliver, with Dr. L. Guterbock, regards them as compound in structure. The former gentleman represents the smaller "molecules" as about 1.12000th to 1.8000th of an inch in diameter; and he regards these as elementary parts of the larger globules; three of the former being generally united together, and surrounded by a fibrinous envelope, to form one of the latter. But M. Mandl, after objecting to the chemical observations upon which this statement is founded, represents the small and large globules in pus as having no relation to each other; the former being composed of coagulated albumen, can be pro-

duced at any time by adding a small quantity of salt to an albuminous liquid; the latter, which are the proper pus or mucus globules, and are all identical in shape, size, and chemical properties, are formed by the coagulation of fibrin. By placing a drop of blood between two glasses, M. Mandl states that the formation of globules by the coagulation of fibrin may be demonstrated with the microscope, and that these globules in the blood are identical with those of pus and mucus; and, moreover, they are identical with the nuclei of the cells of tissues, believing that all the tissues and organs take their origin in the fibrinous globule.

By the table before us we learn that pus differs from mucus, in having in solution a large quantity of albumen, coagulable by heat, acids, and the ordinary reagents; in containing iron, and in its incinerated ash affording a much smaller portion of saline matter. And at the same time there is great reason to believe that the animal matter of mucus is albumen, in a modified or disguised form.

*Puriform mucus*, as secreted copiously in chronic bronchitis, resembles simple mucus which has been exposed to the air. It is very opaque; often contains greenish masses; is exceedingly tenacious, so that on attempting to pour it from one vessel to another it forms a continuous rope, two or three feet in length; and it is scarcely miscible with water on account of its tenacity. Under the microscope it exhibits globules resembling those of pus. According to Dr. Bird, it has in general a faint but a distinct alkaline reaction, which becomes more obvious on a few days' exposure to the air; and in all its actions with chemical substances, it exemplifies mucus containing globules in intimate diffusion, and thus approaches to the nature of pus.

No doubt it has passed in your mind, that pus and mucus alternately run into each other, and that there is no clear line of demarcation between them. This is the obvious explanation of many of the contradictory results which chemists have obtained. I now wish to call your attention to some very recent and important experiments made by Drs. Babington and Bird, by which it appears that pus may be converted into a factitious mucus. The peculiar action of alkalies and some of the neutral salts upon pus, has long been a subject of remark; but Dr. Babington was the first to approach very nearly to the formation of mucus from pus, by treating the latter with solution of an alkali; and nearer still by treating it with chloride of sodium. I must limit myself to one illustration of this metamorphosis. Solution of chloride of sodium and chloride of ammonium, mixed with pus in equal bulk, and agitated for some minutes, produces in half an hour a nearly diaphanous viscid mucoid mass. This mass, on being washed of superfluous saline matter, is found on analysis to contain both the salts in combination with the pus. The fluid obtained from this mucoid mass, diluted with distilled water containing a small quantity of soda, then well agitated, and a stream of carbonic acid passed through it as long as any of the gas is taken up, passes slowly through a filter. This filtered fluid has a faint alkaline reaction, is tenacious enough to form a continuous rope, froths readily on agitation, and yields the characteristic membrane,—like precipitate of mucus with acetic acid, and in all its reactions and qualities, it is quite impossible to distinguish it from mucus or saliva. The result of the whole of the experiments to which I have alluded is, that the saline substances form definite compounds with the pus, and the fact that mucus contains much more saline matter than pus; and, moreover, "that the amount obtained by incineration from different specimens of mucus, will be found to diminish nearly in the ratio of its opacity, or, in other words, of its approach to the puriform state," lead to the legitimate conclusion, that for pus to become mucus, it is absolutely necessary for it to absorb or combine with saline matter, in very considerable quantity.

I may now be permitted to quote a remark made by Dr. Golding Bird, "that if the lining membrane of the larynx and trachea, which presents normally a surface secreting genuine mucus, be considered as pouring out the albuminous particles of the blood combined with an excess of saline matter (thus constituting mucus)," as in a simple catarrh, "we have no difficulty in understanding how the same membrane may, from incidental circumstances, pour out the albuminous particles of the blood, combined with a small proportion of saline matter constituting lymph;" and, again, "if this hypothesis be admitted, we must consider, for example, the secretion of the larynx and trachea, when in a state of health, as chemically different from that poured out under the irritation of croupy inflammation, only in the different proportions of saline ingredients present in each." Gratified as I am in the highest degree at the progress of these investigations, I cannot help observing, that if we are determined to make the "irritation" of the membrane a barrier, beyond which our inquisitiveness is not to penetrate, we must be content with isolated pathological facts, without any hope of connecting them with their causes, or any prospect of arriving at general principles, or improved methods of treatment. Mucus is a secretion from healthy blood; which latter affords, on analysis, a certain quantity of chloride of sodium. Pus, purulent mucus, and fibrin, are derived from inflamed blood, which affords a diminished quantity, sometimes only half the

usual proportion of that salt; but we see that pus differs from mucus in containing a smaller quantity of salts, and that it can be converted into a substance closely resembling mucus, by treating it with salts, and more particularly with the chloride of sodium. Without placing implicit reliance, in the present state of pathological science, on the accuracy of all these chemical details, here seems to be a glimmer of light thrown upon the state of the blood, in connection with the nature of the secretions, in the healthy and inflamed condition of a part. As taught by Dr. G. Bird in his lectures for some years past, pus contains *all* the elements of blood; and we shall see that the qualities of pus depend, in a great measure, upon the qualities of the blood from which it is derived.

*Pyohæmia of M. Piorry—Purulent Blood.*—The frequent occurrence of pus globules in the blood has been recognised by several individuals. Mr. Gulliver informs us, that he has detected them in hectic and inflammatory fevers, in almost every instance in which there was either extensive suppuration or extensive swelling, although pus could not be detected in any of the textures. For the reasons already given, it is not likely that they are received from without the vessels; and the most probable account we can give of these globules is, that they are formed in inflamed blood within the vessels. I should say, hypothetically, that the blood retarded in some of the capillaries of an inflamed part is so altered in composition, that a true *liquor puris* is poured out, and that a portion of this may become globular even within the vessels, and thus be carried into the general circulation. But the evidence of purulent blood does not rest upon the existence of the pus globule in it, which is rather adventitious than essential. This kind of blood when drawn from a vein, is described as not differing greatly in appearance from the same fluid in health. M. Blandin says, it is often blacker and more fluid. On coagulation there is nothing particular in the clot, examined with the greatest care. But when the blood is both inflamed and contains pus, a yellowish, opaline, or greenish yellow (buffy) coat is formed, in which M. Piorry has made the important observation, that *greyish granulations* of a puriform aspect are suspended. The liquor sanguinis is often opaque, and the serum becomes altogether buffy. The buff is evidently formed of two substances; the usual fibrinous substance and the granulations. It is in general softer, has more of a mucous appearance, and a greenish colour; and sometimes it is more liquid still, and seems to be rather albuminous than fibrous. The granulations are found in the substance of the buffy coat, but nearer to the clot than to the surface. They have a greyish colour, deeper in the centre than at the circumference; and in the latter, their colour is usually confounded with that of the buff itself. They vary from the size of a poppy-seed to that of hemp-seed, and some are even as large as a pea. In two cases recorded, it was possible to separate them with the point of a scalpel from their fibrinous envelope. Their consistence is soft, but they are divisible with a sharp instrument. They may be seen most distinctly in a thin layer of buff by means of transmitted light, varying in number in different instances, and in general smaller as they are more numerous. M. Donné says, "in washing the inferior surface of the buff, so as to free it from red clots, the granulations become more distinct, as cutting through them they seem to be formed of small clots, imprisoned, as it were, in the surrounding buff; in fact, on pressing them out, the buff presents a distinct cavity." It is important to remark, again, that the granulations in question can only be detected in the buffy coat; if there be no buff they are buried in the red clot, and are lost in consequence of the deep colour which they imbibe. In the cases recorded by M. Piorry they coexisted with inflammation of the blood and lungs, there being pus in the latter organs, and they were met with from the fourth to the tenth day of the disease.

I have described this observation thus particularly, on account of its great importance, in order that it may be confirmed or refuted; and I will venture to suggest, that if these granulations should be met with, it would be advisable to submit them to microscopical as well as chemical examination. In addition, I should remind you in this place, that pus has been found by almost every pathological anatomist in the blood-vessels and lymphatics, under such circumstances as to leave little doubt that a portion must have been mixed with the blood, and circulated throughout the body.

*Causes of Pyohæmia.*—Although Andral admits a purulent diathesis, as he does a tubercular diathesis, and there can be no doubt that the blood of some individuals is so constituted, that they are predisposed to the formation of pus upon every slight occasion, yet, if a purulent state of the blood have a real existence, it is, at all events, for the most part, a consecutive and not a primary disease. Accumulations of pus, unaccompanied by any appreciable disease of the surrounding solids, exist, at the same time, in different parts of the system. These purulent collections occur especially after operations, to remove parts from which purulent discharges have been kept up for some time. Any organ, cellular in its structure, in which absorption is active, becoming the seat of suppuration, particularly when the pus is not encysted, may become the cause of that series of phenomena which is here called pyohæmia. In fact, whenever matter is

confined within the body, this affection is liable to be produced. An instance in which this fluid appears to be introduced, ready formed, into the veins, is furnished by suppurative inflammation of the uterus, in which the fluid has been found in the uterine, hypogastric, and iliac veins, and the inferior cava. Thus, again, pus has been found in veins that exhibited marks of irritation, independent of any collection elsewhere; and the inference has been drawn, that in all cases inflammation of the vessels, venous or capillary, is an antecedent to the collection of pus in veins; but the cases on record by no means bear out such an opinion.

In fact, many cases occur in which it is totally impossible to account for the origin of the pus upon received principles, and the question natually arises, is pyohæmia ever a consequence of hæmatitis? If I were to reply in the affirmative, it would be on purely hypothetical grounds; and you know that my object is not to weave hypotheses, but to place facts before you as far as I can determine them. You know the slight difference there is between pus and blood; and I have stated to you, with the authority upon which it is founded, the analogy which subsists between pus and inflamed blood as regards some of their salts. Reviewing all the facts so far as opportunity has served me, and falling back upon my own experience, I cannot help thinking that a morbid change does, at times, take place in the blood, apart from any local affection whatever, by which it is disposed to pour out a *liquor puris* in various parts of the body; but, at the same time, it must be confessed, that this is a subject involving a great many difficulties.

*Symptoms and Consequences of Pyohæmia.*—The existence of pus in the blood, or of the morbid state of the blood to which I have referred, admitting its reality, is the origin of the most dangerous symptoms. M. Piorry affirms that, whether pus be injected by the veins, absorbed from an abscess, taken up by the vessels in consequence of a solution of continuity, or, as we have supposed, developed in the blood itself, its effects upon the whole economy are analogous. So much is this the case, that, making allowance for the difference of organisation between man and animals, the experiments of M. Gaspard, briefly stated in TABLE XXIII, 75, 76, have been taken as their type. But these experiments, to be fully appreciated, must be read in detail. ("Magendie's Journal," tom. ii.) Gaspard's first conclusion is, that although the admission of pus into the blood-vessels deranges the constitution, it does not necessarily destroy life, unless the quantity be considerable and the introduction sudden. The modifications of its effects depend upon the quantity of pus received, its qualities, the rapidity with which it is absorbed, and the state of the organs by which it should be eliminated. Laudable pus in small quantity produces rigors, reactions, and sweating; the symptoms, however, are, for the most part, complicated with those of the affection of the organ or part in which the suppuration has developed itself; but whatever this may have been, if the disease proceed to an unfavourable termination, symptoms, for the most part typhoid, set in. When a large quantity of pus is suddenly received into the circulation, syncope, extreme depression, great disturbance in the action of the heart, failure of the vital powers, and rapid death, may occur. When the pus is absorbed more slowly, and, more particularly, if it be fœtid, the symptoms are those of malignant typhus fever, running its course more rapidly than malignant diseases in general do. More especially, there are observed rigors, vomiting, sweating, rapid pulse, thirst, fœtid breath sometimes exhaling a purulent odour, sometimes jaundice, sometimes, but by no means in all cases, violent cerebral symptoms with delirium and coma, diarrhœa, dysentery, and ultimately those occurrences which mark the more rapidly fatal cases. Upon the whole, there is no disease more malignant or more violent than this disease of the blood.

*Post-mortem.*—The blood is frequently very fluid; it contains many coloured coagula, black, white, yellow, green; and they are described as sometimes having a granular texture, most distinct on cutting into them, and as sometimes containing globules or masses of pus. Some persons die with all the symptoms of this disease, and, except in the blood, no post-mortem appearances can be detected. In all the cases in which the blood presented the granular appearance before described, the bronchial tubes, or the air vesicles of the lungs contained pus, but the granulations cannot be detected after death for the reasons then given. In some instances the interior of the clots contained softened fibrin. There may be neither morbid vascularity nor fibrinous coatings in the interior of the vessels; and even in cases classed as phlebitis, pus may be detected in the veins with scarcely any trace of inflammation. Purulent depôts, large ulcerated cavities, abscesses in the cellular tissue, pus in the synovial and serous membranes, having presented more of the phenomena of inflammation during life, are frequently found. In fact, the post-mortem appearances might be collected from what has been said of the causes and phenomena of pyohæmia, and to a certain extent from the experiments before alluded to.

## RESEARCHES
### INTO THE
## PATHOLOGY, PHYSICAL SIGNS,
### AND
## TREATMENT OF PERICARDITIS;
### ILLUSTRATED BY CASES.

*By* THOMAS MOORE, *Secretary to the Dublin Medico-Chirurgical Society for* 1840-41.

[Read before the Dublin Medico-Chirurgical Society, during the Session 1838-9.]

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CASE IV.—This case, resembling in many respects the one first treated of, will be found interesting, though circumstances prevented a necropsy. By contrasting the two, we can judge whether the cases bear any similarity to each other.

A blacksmith, forty years of age, of full plethoric habit, and much addicted to drink, was brought into hospital yesterday, Nov. 8th, in a state of extreme debility and collapse, suffering from great distress of breathing, and a torturing sensation of suffocation; no trace of pulse could be felt in either wrist; the extremities were cold and of a livid hue. Although supported by two persons, he had hardly strength to reach the top of the stairs; after mounting four or five steps, he became so weak and overcome as to be forced to sit down and pant for breath; in the evening it was several times thought that he was on the point of choking. Extensive cupping over the chest, and ten-grain doses of calomel were ordered.

This attack he dates as far back as seven weeks (having previously been in good health), from incautious exposure to cold whilst in a profuse sweat. A severe cough, with expectoration of thick, ropy phlegm; slight stitches in the side, and pains in the loins ensued; his breathing was not much affected; during the four succeeding weeks he continued sometimes better, at other times worse, according to the different cough mixtures and various purgatives he received; his sufferings at length became intolerable, so that active depletion was resorted to, whereby instant relief was afforded. For several days he was better; but being again subjected to the hardships of the weather, he was seized with a violent beating of the heart, followed, in a few hours, by an "intense burning heat," and pains in the left breast. From this period he has daily grown worse; his feet and body have become dropsical; and, since the occurrence of the palpitations, he has been obliged to lie on the right side, from an inability to respire when on the left.

His face this morning (9th) is bloated, and of a bluish colour; the eyes are muddy and watery; conjunctiva jaundiced; lips of a livid colour; tongue parched and brown; the pulse can be felt with difficulty, but not counted; its character is intermittent, sometimes disappearing insensibly from beneath the finger; the jugular veins of the left side are turgid, and possess an undulatory motion; the lower portion of this side of the neck is puffed out and tumid, which is very obvious when contrasted with the opposite side. Percussion practised over this tumour, in a light and quick manner, obtains a clear sound; the respiratory murmur, mixed with a sonorous râle, is distinctly audible; percussion over the left clavicle sounds well, not so upon the opposite one; when practised over each side, the natural resonance is not emitted from either, the decrease being more evident over the left, the cardiac region and its vicinity in particular; the heart's impulse is feebly felt, at the junction of the ribs and sternum; its sounds are normal, but its action weak and very irregular; respiration also is feeble here; for several inches above and below the right nipple, a coarse crepitating râle is heard; posteriorly, percussion over the right side is natural; the vesicular murmur is distinct in every part, perhaps louder than usual, whilst over the left the lightest tap resounds with preternatural clearness; the respiration is loud and the voice remarkably resonant; the abdomen is tender and swollen; pressure over the hepatic region causes exquisite pain; there are evidences also of enlargement of this viscus. It was ordered that he should be blistered and mercurialised.

The next day (10th) bronchitic râles developed themselves in all parts of the chest, manifesting an universal effusion into all parts of the bronchial tubes. In the night he died suddenly, whilst sitting up in bed.

No post-mortem examination could be obtained. When comparing these two cases, you will at once perceive the resemblance they bear to each other, not only in the history, mode of attack, symptoms, and physical signs, but also in the similarity of death (in mentioning this characteristic feature, it must not be conceived that death was unexpected, far from it, but occurred at a time when least expected, and either shortly after, or at a moment when the system seemed to have rallied, and an improvement was obvious to those who were watching and attending on the patients). Had we not in the one, the little girl, the violent thumping of the heart; in the other, an excessively strong beating, occurring in each without any premonitory pain—both having had a cough for many weeks before, and each being free from rheumatic pains in the beginning: observe the condition of each on admission; the apparent sinking; the collapse and debility; the recurrence of the palpitations; the dread of immediate suffocation; no pulse to be felt at first, afterwards the same description of irregularity and intermission in each; observe, too, the external appearances, and,

in succession, the various phenomena: in each, the swollen and œdematous state of the integuments, differing in one particular in the girl, in not being so generally diffused over the body; the turgescence of the jugular veins, confined chiefly to the left side; the dull sound on percussing the anterior part of the chest, although more marked and extensive in the girl; meanwhile, nearly the same curious results were afforded by percussion, posteriorly over the left side, in the blacksmith, as those, the cause of so much perplexity in the girl's case.

Besides corresponding so closely in all the foregoing particulars, there still remains a sign which warrants our inferring a very strong connection between the two, as to the nature of the disease; in the one readily accounted for, in the other founded on analogy and conjecture. The existence of a "supra-clavicular tumour or puffness," is again alluded to; it is true, there are many diseases which, by being complicated together, would cause many symptoms and physical signs analogous to those described here: in illustration of which, we need only instance the complication of acute emphysema of the lung, with an enlarged and hypertrophied heart. But since we have two cases so much alike, and had in the one the opportunity of investigating the causes of the symptoms, signs, and death, are we not justified in inferring, when we meet them in a second patient, that they are caused by the same disease which occasioned them in the first? If such a postulate were not granted, with what authority could any stethoscopist assert that there existed in one man a pneumonia, in another a pleuritis, and in a third a pneumo-thorax?

## AMAUROSIS FROM HYSTERIA.

*To the Editor of* THE LANCET.

SIR:—The following observations on hysterical amaurosis are, as far as I am aware, original; and, should you deem them of sufficient importance, I should feel obliged by your giving them publicity. I am Sir, your obedient servant,

EDWARD HOCKEN.

Exeter, July 28, 1840.

That hysterical derangement is capable of simulating most diseases is well known, but the exact condition of the nervous system producing such affections appears to me less clearly shown, whether the deranged condition of innervation be local, produced, but modified, by the same causes as induce the hysteria itself, or symptomatic of the general condition of the nervous system; or, lastly, a reflected action from cerebral disturbance. But I will here narrate a case of amaurosis, which I believe to have been simply functional, and dependent on hysteria as its originating and continuing cause, and which will, I think, authorize me in stating that hysterical amaurosis may be added to the number of simulated diseases.

A young woman, of sanguineo-melancholic temperament, about 22 years of age, who had previously suffered from hysteria, and presented a peculiar aspect of countenance frequently observable in the hysterical, became affected with symptoms which somewhat resembled those of chronic retinitis. She complained of imperfect sight in both eyes, occasional severe pain over the brow, great intolerance of light, and an appearance sometimes of luminous and dark spectra. On examination the orbicular muscles were found to act spasmodically, the eyes watered profusely, and there was evidently the greatest intolerance of light; but there was little, if any, vascularity, or any diseased appearance in any of the textures; the pupils were contracted. As to her general health, she stated that she was very nervous, that she was readily frightened and excited by slight causes, and had occasional troublesome symptoms about the throat, with the sensation of globus hystericus. The pulse was quick and weak habitually, with palpitation towards evening; the functions of the uterus irregular, but otherwise healthy. She was treated by medicines directed to the condition of the catamenia, with tonics and aperients, antispasmodics and stimulants: locally by leeches and blisters in the neighbourhood, and astringent collyria to the conjunctiva. There were frequent improvements and relapses during the treatment, which was thus extended over a space of many months; and although in a less degree, the symptoms still continue unsubdued.*

I have mentioned this case as clearly showing the peculiar symptoms of the hysterical amaurosis in an uncomplicated form, and will now proceed to speak of the symptoms, terminations, and diagnosis of the disease, as far as my present opportunities of observation have extended.

*Symptoms.*—The symptoms which characterise this form of amaurosis are the following, dividing them into the objective and subjective:—Spasmodic contraction of the orbicular muscle, especially on exposure to bright light, evident intolerance of its influence, which occasions a sense of most distressing anxiety, profuse lachrymation and spasmodic closure of the lid, if the eye be examined. The globe itself when exposed presents nothing unnatural; there is not the slightest zonular, pinkish, hair-like arrangement of vessels around the cornea, no conjunctival vascularity when the lid is

* This case occurred under the care of Mr. Delagarde, at the West of England Eye Infirmary.

first raised; but if continued in a strong light, then scarlet redness comes on, depending on irritation of that tunic, which quickly disappears on the removal of the exciting cause. The pupils (for the affection always exists in both eyes at the same time) are contracted, and this in proportion to the degree of light present, and dependent on the excessive irritability of the retina; but they contract and dilate fully and freely in either eye by alternation of light and shade. The texture of the iris retains its healthy brilliancy and radiated appearance, its texture and colour; nor is there any irregularity in the pupillary edge, no retraction with bulging forwards of the iris, nor any alteration in the situation of the pupil. The vitreous humour retains its healthy character: hence the eye is neither flaccid, nor hard and prominent; there is no greenish discolouration, no deep-seated opacity. The lens, the cornea, the aqueous capsule, and the aqueous humour, are all healthy: thus a local examination would lead to no knowledge of the pathological causes of the other symptoms which we learn from the patient, as the eye and its appendages appear perfectly normal in their structure and condition; but the retina and conjunctiva, and sympathetically the lachrymal gland and orbicular muscle, are morbidly irritable and sensitive.

The patient, when questioned about her local symptoms, complains of defective vision, and great sensibility to light; these being invariably connected, so that it is impossible to separate and specify how much the one is dependent on the presence of the other: thus when she (for I have never seen it in males) attempts to view any object it is at first imperfectly defined; but the increased sensibility of the retina, the lachrymation, and the spasmodic closure of the lid, soon obstruct vision completely. In the dark the intolerance of light diminishes, but never disappears, and the sight still continues imperfect, but is nevertheless improved; but, on the contrary, in bright sunshine, or in an intensely illuminated apartment, she sees little or nothing, and strenuously closes the lids, like a child suffering from strumous photophobia. The appearance of dark or luminous muscæ is unusual, but they never trouble the patient as in retinitis, nor is the globe the seat of any uneasiness or pain. There are the general and local symptoms of hysteria present: thus there is usually present a circumscribed pain over the brow, analogous to clavus; a globular sensation originating in the abdomen and mounting to the throat, accompanied with a desire to swallow frequently, and with sensations of choking. There is great excitability and irritability of the nervous system: thus slight exciting causes produce exaggerated effects; slight impressions hurry the heart and circulation, irritate the nervous system, disturb the passions and affections, derange the respiration, and may even bring on a complete attack of hysterical convulsions, coma, or catalepsy. The temper of such individuals is fickle and uncertain; the digestive functions usually somewhat disturbed, accompanied with borborygmus; the catamenia may be morbidly profuse, or, on the contrary, scanty, and secreted with pain.

*Prognosis.*—As regards the usual termination of these cases I do not feel certain; but the probability is, that the amaurosis would receive a cure by the same means which put a stop to the hysterical condition of the system; but should a state of permanent hyperæmia, an alteration of nutrition, or any morbid formative process be set up by prolonged functional disturbance (and this is neither improbable or impossible, judging from analogy of the effects and consequences of functional disturbance in other organs, especially if that disturbance be severe in kind, or prolonged in duration); then a simple functional alteration of sensation and sensibility, which constitutes hysterical amaurosis, might verge insensibly into amaurosis from inflammation or congestion, or derive its origin from analogous or heterologous changes.

*Diagnosis.*—The symptoms of hysterical amaurosis resemble, in some measure, those of chronic retinitis, and possess sufficient analogy in their leading points to deserve a few remarks on diagnosis, both from the latter affection, and also from photophobia and blephorospasmus depending on strumous ophthalmia, or its accompanying constitutional derangement. The diagnosis from chronic retinitis is easy: it is unattended with that excessive contraction of the pupil which accompanies that disease, the pupillary edge is not discoloured, but regular and not retracted; there is no thickening, no effusion of lymph, no buffy discolouration of the fundus, but the humours are clear and transparent. Besides, the pupils dilate and contract by alternations of light; it affects both eyes, whilst chronic retinitis is usually confined to one eye. The constitutional symptoms vary also: in one, there is well-marked hysterical derangement; in the other, nocturnal fever. They agree in the symptoms of intolerance of light, lachrymation, imperfection of vision, which, however, in the case of retinitis, is accompanied by luminous spectra and a distorted broken image, improvement of the symptoms in a weak light, and aggravation by an intense one; whilst chronic retinitis has deep-seated pain in the eyeball superadded, and zonular vascularity which penetrates the sclerotic about a line from the cornea, leaving a white ring intervening; and this, though slight, is an evidence of its inflammatory character.

The distinction between hysterical amaurosis and strumous photophobia presents no difficulty. The latter occurs in children, is

usually attended with humid phlyctenulæ on the cornea or conjunctiva; whilst the vascularity is of the fascicular character, and in imperfect light the sight is unaffected.

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## THE LANCET.

*London, Saturday, August* 15, 1840.

The Twenty-one self-chosen chartered jobbers of Lincoln's-inn Fields have elected another President. The post is now not one of honour. The *Twenty-one* feel that they exist in spite of the members of the College of Surgeons; they are convinced that they have not the confidence of the profession; they dread an appeal to their legitimate constituents. *Five thousand* medical practitioners have signed petitions to Parliament against their usurped powers: the hand of Destruction hangs over them. This is, probably, the last President who will sit comfortably in the seat of Sir Everard Home; and the forlorn Mr. Vincent, like "The Last Man," must "sigh" when he passes the "gallows' foot," and "looks at the rope and ladder." All the world is aware of Mr. Vincent's surgical eminence and his devotion to the College; but, without intending to overlook his claims, we cannot help thinking that, under the circumstances, the bad eminence which he has attained, and is likely to attain, would be more appropriately occupied by his Bartholomew colleague, Mr. Lawrence.

The Blackfriars Company is imitating the example of its graceless Dublin Sister, and is prosecuting or harassing several well-qualified surgeons, while quacks and ignorant druggists are allowed to prescribe and practise as apothecaries, with unlicensed impunity; but it opposes no open force to the flood-tide of Medical Reform.

The College of Physicians has sunk to the lowest ebb of *poverty*, and has none of the moral power derived from greatness, usefulness, or a life of conscious integrity. The College formerly inspected the Lunatic Asylums of the Metropolis; that honourable office it has lost, being now confided to the Metropolitan Commissioners in Lunacy. The President and officers of the College are at the head of the Vaccination Board; and the Vaccination Extension Bill has given the power of drawing up regulations to the Poor-Law Commissioners. The medical practitioners of England have to send the Vaccination Reports to the Poor-Law Commissioners, and not to the Board over which Sir Henry Halford and the Censors of the College preside. When epidemics raged, or when any question of public health was agitated, the College of Physicians was at one time consulted by the Government. That was the course pursued in the time of Elizabeth, and in later reigns. Under Victoria, the Marquis of Normanby,—in place of Sir Henry Halford,—employs Mr. Edwin Chadwick to conduct a sanatory inquiry into the condition of the people of England and Scotland. So far has the College of Physicians fallen in consideration, that the public and the profession appear to have wholly forgotten its existence; of which, it must be confessed, they were for many years only reminded by its miserable by-laws, prosecutions, and acts of injustice. The impotence of its actual state is surpassed by the infamy of its history; but if the experiment had not been made, no one would have imagined that the sins of this hoary Corporation, with the aid of its profligate companions, could have brought so much mischief and ruin on the members of an honourable profession. So long as the self-elective Corporations possess their *exclusive* powers, the entire body of medical practitioners must suffer; and it is impossible to say where their sufferings, indignities, insults, and spoliation will stop. No medical practitioner is now safe; he is exposed to be robbed by the quack, and to the insolent threats of adventurous competitors, if he refuse to undertake revolting offices, which are alike alien to the feelings of the human heart and the habits of a generous profession.

The *Small-pox Prevention Bill* might have been carried, if the friends of that measure in Parliament had been supported by Councils representing 20,000 medical practitioners. We warned our brethren that the clauses of the *Vaccination-Extension Bill*, which the College of Physicians, the self-elective Council of the College of Surgeons, the masters of the Apothecaries' Company, did NOTHING to oppose, would interfere to a very serious extent with private practice. The vaccination is to be gratuitous; every one who applies will obtain an order; and it is evident that if care be not taken the entire vaccination of the country will pass into the hands of the new Guardian-and-overseer-elected-vaccinators. The following circular, addressed to the Directors of St. Pancras, is a pregnant example of the evil which we predicted:—

"SAINT PANCRAS, MIDDLESEX.

"Sir:—You are requested to meet the rest of the Directors of the Poor of this parish, at the workhouse, on Tuesday next, the 11th day of August instant, at ten o'clock in the forenoon, to consider the following notices of motion, in addition to the ordinary business of the day.

"1. That this Board of Directors, being Overseers of the Poor by virtue of their office as Directors, is of opinion, that a fair remuneration for successfully vaccinating any person, under an Act of Parliament, intituled 'An Act to Extend the Practice of Vaccination,' passed 23rd July, 1840, is two shillings for every person; and that this Board is of opinion that, for the protection of the rate-payers of Saint Pancras, a certificate should be produced of the successful operation of the vaccine virus, signed by the vaccinator, parents, guardians, or relations.

"2. That this Board deem it expedient *to contract with the medical officers of the parish*, as vaccinators under an Act of Parliament, passed the 23rd of July, 1840, viz., Mr. Johnson, Mr. Delisser, Mr. Curtis, and Mr. Eastcott; and this Board considers *two shillings per person successfully vaccinated, a sufficient remuneration for the operation.*"

The meeting has taken place; the monopolists are defeated; and by virtue of the clause engrafted on the Vaccination Extension Bill, the Vaccination of the children of St. Pancras is thrown open to all resident, legally qualified practitioners. Private practice will not be interfered with; and on the principle of the *Small-Pox Prevention Bill*, a stimulus will be given to individual exertion.

One thing surprises us, that a respectable body of men, like the Directors of St. Pancras, wishing to do right, and to act fairly; well acquainted too with the value of skilled labour; should fix the fee for Vaccination so low, so disgracefully, shabbily low, as *eighteenpence*. Why, if they asked their attorney a single professional question, he would book them for *three shillings and fourpence*, or *six shillings and eightpence*. And yet they permit themselves, in their official character, as the representatives of a respectable, wealthy parish, to pronounce *eighteenpence a sufficient remuneration* (!!) for the efficient performance of an important delicate surgical operation. The fee should in no case be less than *half-a crown*. Medical practitioners are anxious to diffuse the protection of a discovery, with which they have been able to bless mankind, as widely as possible among their poorer neighbours; and they will on this ground be satisfied with a moderate fee, and make any reasonable sacrifice, provided their private practice be left undisturbed: but the parishioners of St. Pancras cannot desire that an operation, which is of advantage to all classes in the parish, should be performed by one class without any adequate reward. The resident medical practitioners should bring the facts fairly before their fellow-ratepayers, and it will, no doubt, have the desired effect.

The medical practitioners of every part of the country will do well to be on the alert, and to avail themselves of the clause in the Act to avert the monopoly, and the disastrous breaking in upon private practice, with which they are threatened. They can, of course, expect neither aid nor council from the heads of the Medical Corporations.

We shall, next week, resume the questions connected with the rankling injustice of the Medical Corporations.

We have before us a volume of Statistical *Reports on the Health of the Navy* for the seven years, 1830-36. The Report has been drawn up by Dr. John Wilson; it embraces the American, West Indian, and Mediterranean commands, and is executed in a manner highly creditable to that gentleman and to Sir William Burnett. Dr. Wilson has spared no pains to present the facts to his readers in a correct form; and the results are, as might have been anticipated, interesting in no ordinary degree. We shall take an early opportunity of analysing the contents of the volume for the benefit of our readers, and shall then have an opportunity of doing justice as well to the medical officers of the Navy, by whom this valuable and extensive series of observations has been made, as to the parties by whom they have been communicated to the public.

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The following announcements appear in the Parliamentary Report of the "Votes and Proceedings" of the House of Commons, for Monday, August 10th, 1840:—

"Medical Profession Bill for the Registration of Medical Practitioners, and for the establishment of a College of Medicine, and for enabling the Fellows of the College to practise Medicine in all or any of its branches, and hold any medical appointments whatsoever, in any part whatsoever of the United Kingdom. Ordered to be brought in by Mr. Warburton, Mr. Wakley, and Mr. Hawes."

"*Notice given on Monday, Aug.* 10.—Mr. Wakley.—Bill for the Establishment of a National Faculty of Medicine, comprising its executive departments, one for England, the second for Ireland, and the third for Scotland; the senates, or governing bodies, to be elected, in the first instance, by those members of the existing Medical Colleges and Universities who may become assenting parties to the new institution, and afterwards the elections to be confined to persons who may possess the diplomas or degrees of the National Faculty (*next Session*).

COPY OF THE

## SMALL-POX PREVENTION AND VACCINATION ACT.

*As printed by George Eyre and Andrew Spottiswoode, London, Printers to the Queen's most Excellent Majesty.* 1840.

ANNO TERTIO AND QUARTO VICTORIÆ REGINÆ.

### *CAP. XXIX.—AN ACT TO EXTEND THE PRACTICE OF VACCINATION.*

(23 July, 1840.]

*Poor-law Guardians to contract with their Medical Officers, or other Medical Practitioners, for Vaccination.*

Whereas it is expedient to extend the Practice of Vaccination: Be it therefore enacted by the Queen's most Excellent Majesty, by and with the Advice and Consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the Authority of the same, That from and after the passing of this Act it shall be lawful for the guardians of every parish or union, and for the overseers of every parish in which relief to the poor shall not be administered by guardians, in England and Wales, and they are hereby directed to contract with the medical officers of their several unions or parishes respectively, or with any legally-qualified medical practitioner or practitioners, for the vaccination of all persons resident in such unions or parishes respectively: Provided always, that it shall be a condition of every such contract that the amount of the remuneration to be received under the same shall depend on the number of persons who, not having been previously successfully vaccinated, shall be successfully vaccinated by such medical officers or practitioners respectively so contracting.

*Guardians to conform to the Regulations of the Poor-law Commissioners.*

II. And be it further enacted, That in making such arrangements as may be required for the execution of this Act, such guardians and overseers, and all other officers engaged in the administration of the laws for the relief of the poor, shall conform to the regulations which may from time to time be issued by the Poor-law Commissioners in that behalf, which regulations the said Commissioners are hereby authorised and required to make and issue.

*Medical Officers to report the Number of Persons Vaccinated, &c.*

III. And be it further enacted, That such medical officers or practitioners shall make a report to such guardians or overseers from time to time of the number of persons successfully vaccinated by them respectively, and shall make such further report, with respect to the persons so vaccinated, as such guardians and overseers, under the direction

of the Poor-law Commissioners, shall require.

*Copies of Contracts to be sent to Commissioners.*

IV. And be it enacted, That such guardians or overseers shall forthwith, after the conclusion of any such contract as before mentioned, transmit a copy thereof to the Poor-law Commissioners.

*Annulling of Contracts.*

V. And be it enacted, That if such Commissioners shall not annul such contract within fourteen days from the receipt thereof, such contract shall thenceforth not be liable to be annulled by such Commissioners.

*Guardians of Poor-law Unions in Ireland to divide their Unions into Districts, &c.*

VI. And be it further enacted, That as soon as may be after the passing of this Act the guardians of every Poor-law Union in Ireland shall (subject to the approbation of the Poor-law Commissioners) divide such union into districts of convenient extent, and may alter the same from time to time, subject to the like approbation, and shall (subject to such approbation as aforesaid) contract with competent medical practitioners for the period of one year, and so from year to year as such contract may expire, for the vaccination of all persons who may come to such medical practitioners for that purpose.

*Previous Provisions with respect to Unions in England and Wales to apply to Ireland.*

VII. And be it further enacted, That all the provisions hereinbefore made with respect to England and Wales for the making of reports of such medical officers or medical practitioners shall apply to all such contracts as may be made under this Act by the guardians of any Poor-law Union in Ireland; and such guardians, and all other officers engaged in the administration of relief to the destitute poor, shall conform to the regulations and instructions of the Poor-law Commissioners, in like manner as is hereinbefore directed with respect to guardians, overseers, and other officers in England and Wales.

*Persons inoculating or otherwise producing Small-Pox to be subject to One Month's Imprisonment.*

VIII. And be it further enacted, That any person who shall, from and after the passing of this Act, produce or attempt to produce in any person, by inoculation with variolous matter, or by wilful exposure to variolous matter, or to any matter, article, or thing impregnated with variolous matter, or wilfully by any other means whatsoever produce the disease of small-pox in any person in England, Wales, or Ireland, shall be liable to be proceeded against and convicted summarily before any two or more justices of the peace in petty sessions assembled, and for every such offence shall, upon conviction, be imprisoned in the common gaol or house of correction for any term not exceeding one month.

*Interpretation of Words.*

IX. And be it further enacted, That every word in such part of this Act as refers to England and Wales shall be interpreted in like manner as such word is directed to be interpreted in an Act passed in the fourth and fifth year of his late Majesty King William the Fourth, intituled An Act for the Amendment and better Administration of the Laws relating to the Poor in England and Wales; and that every word used in such part of this act as relates to Ireland shall be interpreted in like manner as such word is directed to be interpreted in an Act passed in the first and second year of the reign of her present Majesty, intituled An Act for the more effectual Relief of the destitute Poor in Ireland.

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*Acute Hydrocephalus, or Water in the Head, an Inflammatory Disease, and curable equally and by the same means with other Diseases of Inflammation.* By DAVID D. DAVIS, M.D., Professor of Obstetric Medicine in University College, &c. London: Taylor and Walton, 1840, 8vo, pp. 309.

THE above volume has this week issued from the publishers, under the influential name of one of our ablest physicians. On another occasion we shall examine its pathological contents critically. At present we design to afford our readers a very brief glance at the object and plan of Dr. Davis, in addressing his professional brethren on this interesting subject, and to give them an account of his treatment of the disease.

Dr. Davis designs to press on our attention his opinion, that acute hydrocephalus is, and is to be cured as, an inflammatory affection of the vessels of the brain and its investing membranes, the post-mortem appearances resulting from which are,—1. Opacities of those membranes, and fibrinous attachments of them to contiguous membranes. 2. Coatings, linings, and separate masses of fibrine on the surfaces and in certain parts of the brain. 3. Effused and interposed serum in, and upon, and among the convolutions of the brain. 4. Occasionally, purulent matter and disorder of adjoining tissues, as of the tissues within the temporal bone, including, perhaps, the whole organ of hearing. 5. The usual fluid which constitutes the "dropsy" of the

brain,—the product exclusively of the serous and vascular inflammation,—a fluid *sui generis*,—an inflammatory cephalic infiltration from the blood,—ordinary serum, diluted, as it were, with seven times its volume of simple water. The system of treatment recommended will, Dr. Davis considers, find its establishment in the profession under the silent influence of time. Acute hydrocephalus, he says, really means a recent disease, of which inflammatory action is not a *part*, merely, of its character, but *its very essence*. This doctrine supplies the key to the means by which he combats the affection. When the views of Dr. Henry Quin on acute hydrocephalus were promulgated (in the last century), tending to enforce the propriety of its treatment by antiphlogistic measures, a strong prejudice, says Dr. Davis, existed, that

"Young people, and especially children, could not be considered proper subjects for active general bleeding; nor even for topical bleeding on any scale of adequate efficiency. I may advert to this notion as a prejudice of no inconsiderable magnitude in the present day: and, in reference especially to the treatment of acute hydrocephalus, it has exerted a baneful influence on the convictions and practical habits of the physicians of this country during the greater part of my professional life.

"It would startle my reader were I to make the statement that the theory of bleeding in acute diseases, and especially in the acute diseases of children, is very imperfectly known, even at the present day, among the physicians of this country. Such a proposition, however, it will become my duty in the sequel to prove, although it may seem ungracious even to announce it.

"It accords with our universal experience, that whenever it becomes our duty to recommend the abstraction of blood from infants, or very young children, in a way to ensure the efficiency of the operation, the proposition is sure to be received with coolness in the first instance, if not eventually with repulsion or positive non-compliance.

"Hence, no doubt, the fact that even the idea of an ample abstraction of blood as a remedy for acute hydrocephalus was only doubtingly and feebly entertained by Dr. Charles Quin (the son); however distinctly he thought it his duty to announce it in his new theory of the disease, as published in 1779; hence the innumerable cases which we find recorded, of acute hydrocephalus, in the writings of the Fothergills, the Watsons, the Percivals, the Haygarths, and the Witherings of the last century, in the management of which not a word is said about bleeding, excepting by means of leeches applied to the temples or some other part: hence, in the present century, the opinions of Dr. Carmichael Smyth and his contemporaries, in strong objection to the same practice; and hence, finally, the large amount of loss of life which has been sustained by the population of this country, including Scotland and Ireland, for want of correct professional knowledge of the treatment to be adopted for the cure of acute hydrocephalus, from the period of Dr. Carmichael Smyth to the present time."—pp. 228-9.

In presenting to us his views of the correct treatment in detail, Dr. Davis first considers the proper time for abstracting blood, the quantities to be taken, and the modes of taking it. He announces the former to be—the "first opportunity that can judiciously be made available."

"In the event of the case being one truly, and without doubt, of genuine hydrocephalic fever, it would be impossible to avail oneself of too early an opportunity to lay it prostrate before the most active powers of the healing art. Of those powers free and early bleeding should be considered incomparably of the first importance. The case might very probably require this great measure to be followed up by other items of treatment, of indispensable importance; but bleeding, on a proper scale, would, at all events, prove, if not the *one thing, most certainly the first thing needful*. On the accession of any pyrexial ailment in a family, there would probably present themselves to the attention of some of its individual members, certain circumstances not a little calculated to occasion some anxiety, or possibly some good grounds for alarm.

"It should be made a matter of universal information among parents, that acute hydrocephalus is a disease of no unfrequent occurrence; and that the earlier it came within the cognizance of the medical attendant, provided he might be competent to discover its diagnosis and to superintend its treatment, the greater the probability or certainty, other things being equal, of the patient's recovery."—pp. 239-40.

"As to the quantity of blood to be abstracted, in the event of such a measure being determined upon, I know but of one useful, safe, and satisfactory test; and that I beg to propose to the consideration of my reader, as the result of an anxious, cautious, and most extensive experience, during a period at least of about ten years. It is to carry the first bleeding, provided the opportunity be given to prescribe it at the onset of the disease, to full fainting. It is not a state of faintishness that is wanted: it is full and decided fainting. It is that state of enfeebled and reduced circulation, which, together with an occasional suspension of conscious-

ness, is called deliquium animi. It is accompanied by an absence of all colour in the lips, and, also, in a great measure, by a corresponding change of complexion of the whole countenance. The entire surface of the body, and especially of the forehead, is suffused, during this condition of the circulation, with an excessive abundance of cold moisture. Such, I believe, in every case is the condition of the circulation during genuine fainting; and it is to the attainment of that point of reduction of arterial excitement, at least for a time, that I would recommend the abstraction of blood to be carried at the commencement of acute hydrocephalus.

"The first general bleeding having been carried to the extent here supposed, it will rarely happen that any further considerable depletion of the same kind will be required; inasmuch as one good bleeding adopted at the very commencement of an acute disease, will almost always ensure the attainment of what can be fairly hoped for from so decided a measure; at least it will ensure a positive suspension of the progressiveness of the malady; and it will also, in a great proportion of cases, be followed up by the accession of a train of improved conditions, which we shall have no difficulty in recognising as those of a most promising convalescence. I beg to observe that one good bleeding carried to fainting is a much safer practice, as well as more economical of the patient's strength to bear this form of depletion, than several successive smaller bleedings at intervals of days, or even of many hours' duration. The reader will perceive that I here refer to certain results of bleedings which can only, with propriety, apply to what we usually call general bleeding. To produce the best effects of general bleeding, it requires that the blood to be obtained should be abstracted in a short time, and in a full stream. This remark leads necessarily to a consideration of the patient's age and other circumstances."—pp. 241-3.

At five years and upwards, the usual incision of the median vein. Earlier, take enough by cupping behind the ears. (By cupping, the quantity taken can better be measured than when drawn by leeches.) From a child of one year old, four or five ounces. Earlier, from three to five ounces, according to the age and vigour of the child, the heat of head, and the phlogosis. At two years, seldom less than six ounces. Between three and five years, between five and ten ounces, or say bleeding to full fainting.

"Children between six and ten years old will require an abstraction of blood to an amount seldom less than from ten to eighteen ounces of blood, according to their sexes, habits, states of the constitution, amount and character of the existing fever, and other circumstances of presumed ability to sustain and to require the operation. Something, of course, must be left to the discretion of an experienced and competent physician.—Great boys seldom become the subjects of acute hydrocephalus, and young ladies much more frequently than adolescents of the other sex.—For all ages of advanced childhood and girlhood, venesection ad deliquium animi will invariably furnish a safe rule, provided it be carried fairly and honestly to the full extent of the proper meaning of the expression."—p. 246.

Dr. Davis, speaking further of the *mode* of bleeding, introduces the following remarks on the subject of

CUPPING AND CUPPERS.

"But even bleeding, this great measure, this supreme power, of our art, in the treatment of the malady in question, may not suffice to give us full assurance of success; for we have the experience of every day to convince us, and perhaps more frequently than in the case of any other remedy whatever, that it is resorted to too late; and if too late by a single hour, even that hour, being of the nature of time itself, may not admit of being recalled.

"I have hitherto directed my principal attention to one mode of abstraction of blood—that by cupping. This method of taking blood from young children is so satisfactory, for many reasons, that I much regret that the practice of cupping is not more general in every province of Great Britain and Ireland than it really is in many of our larger cities and towns.

"It would not a little surprise my readers were I to state the number of actually good cuppers, in the midst of scores, if not of hundreds of pretenders, resident in this great metropolis. The number, at all events, is much smaller than is generally supposed; whereas there are many very considerable towns in the country which cannot boast of the residence of even one professed cupper. The duty is not unfrequently undertaken by general practitioners; but it is seldom well performed excepting by persons who exclusively devote themselves to that business by profession. The operation here recommended presumes upon its performance being in many cases, at all events, attainable in London.

"For the country I would recommend the union and good feeling of all classes of medical men in a district, to accept and to act upon some such suggestion as the following:—It is, that they would endeavour to select an individual of their own body, and give him their united sanction and encouragement to become a cupper for himself and all the rest of his brethren who might be disposed to promote his interest, residing within the extent of a population which might be considered a sufficient number of inhabitants to keep a professed cupper in tolerably good

employment. In a town of fifteen or twenty thousand inhabitants as a minimum, with the good feeling of the profession in his favour (but, alas! that is the great difficulty), I fancy there might be furnished a moderate sufficiency of business for one dexterous cupper.

"I profess not to be precise in my suggested proportions, nor rigid in my expectation of universal compliance with the principle of the suggestion itself. All calculations of this description in a great country like England must be indefinite, and dependent upon endless diversities of condition and circumstances of the inhabitants of the different districts of the kingdom.

"I should not be a little gratified to hear of a skilful cupper being appointed for every population of forty or even of fifty thousand inhabitants. But I must leave this suggestion with the leading members of my profession; I feel I have no right to urge it on their consideration beyond its fair claims to their attention, on the ground of its reasonableness and promise of great professional utility."—pp. 249-252.

As the best *substitute* for cupping, in the cases of children under five years of age, Dr. Davis recommends incision of the jugular vein. Have the neck well secured, in a good position. Use a narrow-pointed lancet, limit the wound in the integument, and quickly stop the bleeding when enough is taken; but the Doctor does not *recommend* this, in infants of tender age. As regards leeches, the author ascribes the fatal results recorded in the recent work of Dr. Gölis, of Vienna, in so many cases of acute hydrocephalus, to the very tedious and uncertain employment of those animals in place of cupping.

As soon as possible after the fainting, Dr. Davis resorts to *emetics*.

"For a child of six months old, the proper dose should be a fourth or a fifth of a grain of tartarized antimony, and about five grains of powdered ipecacuanha. This form and quality of an emetic will rarely disappoint the expectations of the practitioner; whereas the pleasant draughts and mixtures made with the diluted wines of tartarised antimony and ipecacuanha, usually prescribed as emetics for young children, are occasionally chargeable with that result. * * * * The dose of the emetic powder, under the circumstances which I have now supposed, is the proper measure to be prescribed as an emetic for a child of six months old; and it may be exhibited with the utmost safety. It will no doubt make the infant very sick. But this sickness will have in no small degree the effect of subduing, and of keeping permanently subdued, the over-excitement of the heart and arteries. * * * It is, therefore, neither convenient nor safe to omit the emetic: and if it should produce an amount of sickness which may harass the little patient for some hours, the greater probability of its sufficient operation, the greater the safety which may be reasonably anticipated from its exhibition; the greater, moreover, will progressively prove the reduction of the more alarming symptoms, and the more quickly attained will be our eventual triumph over the malady with which we have to contend.

"To ensure the emetic action of medicines of this class, the patient should be made, if necessary by force, to swallow aqueous fluids at short intervals of time after their exhibition."—pp. 257-259.

"Due attention having been paid to at least two principal indications, I now proceed to recommend a third measure of treatment, of scarcely less value than either of the others; it is, to effect *a speedy reduction of the morbid temperature of the head*. The proximate cause of the disease, it has been sufficiently demonstrated, is an intense inflammation of the vascular tissues of the brain. Where there is inflammation, there is always an inordinate development of heat in the part inflamed. * * *

"It is worthy of observation, that in most cases the principal locality of the vascular turgescence may be tolerably well ascertained by a very simple process,—that of applying our hands to opposite parts of the naked head. A competent physician, accustomed to this duty, will be able, in a few seconds, to fix on the principal seat of the vascular turgescence, about to become established in any given case of acute hydrocephalus. By means of his right hand and his left—instruments which he always carries about him, and without which he never visits a patient,—he has it instantly in his power to arrive at an accurate practical conclusion relative to this most important point of practical inquiry. * * *

"We have next, as a matter of course, the best remedy for the reduction of such excess of temperature to seek. For many years I was under the necessity, in order to accomplish this object, to make use of bullocks' bladders charged with cold fluids, such as iced water, and other solutions of water impregnated with a variety of salts, vinegar, &c. These impregnations were simply employed to lower the temperature of the water. Of late, I have laid aside this troublesome and noisome form of the practice, in consequence of accidentally learning that the house of Mackintosh and Co., of Charing-cross, have succeeded in supplying the public with perfectly water-tight water-cushions.—The mode of using this very convenient implement is to charge a cushion of this description to the extent of its entire

capacity with the intended fluid, and immediately to allow one-half of the whole fluid contained in the cushion to escape, and then suddenly to stop and to secure the valve so as perfectly to prevent the escape of any more of the cold fluid, and at the same time to bar all intrusion of atmospheric air. The cushion will then contain half its capacity of an intensely cold fluid, and no air. The little patient's head is to be laid with its occiput and nape of neck to repose on the middle of this cushion, which will have the effect of rapidly reducing the excessive heat of the head. The rapidity of this change of temperature will bear a direct proportion to the morbid excess of heat of the child's head, and the low degree of temperature of the iced water or other cold fluid within the cushion. The fluid contents of a cushion thus employed in a case of extreme phlogosis, will be converted into a perceptible degree of warmth in less than half an hour, as I have often very distinctly ascertained; and this will make it necessary to recharge the cushion with a fluid of reduced temperature, as used in the first instance; and these changes of fresh fluid in the cushion will become repeatedly necessary in proportion to the rapidity, or the contrary, of reduction of the excessive temperature of the child's head.

"As long as the head shall continue the subject of the excess of heat in question, so long the infant, if conscious, will hail the approach of a newly-charged cushion, whilst, on the contrary, it will express dislike of any interference with its previous state of repose, as soon as it will appear to anticipate a reduced change of temperature of its cushion with alarm. This will be an indication for suspending, at least for a time, the use of the cushion; or, perhaps, as I have observed in many cases, for laying it aside altogether. The cushion must be used, or its use resumed, pro re nata, as the excessive accumulation of heat might or might not return. I wish especially to recommend to the attention of the profession the universal adoption of Mr. Mackintosh's water-cushions in all cases of acute cephalic affections. Their employment for the reduction of excessive temperature in very young subjects of acute hydrocephalus, forms a most important addition to our power over the issues of that formidable disease.

"I have not a high opinion of the use of blisters as a remedy for acute hydrocephalus."—pp. 262-68.

"I scarcely need to observe, that the entire surface of the head must be closely shaved before cold can be advantageously applied either to the sinciput or occiput."—p. 270-1.

Of mercury in the treatment of acute hydrocephalus, Dr. Davis says,—

"As a purgative, I am in the habit of recommending a combination of two or three grains of calomel, and sometimes twice that quantity, with six, eight, or twelve grains of jalap, according to the age of the patient, as soon as the sickness shall have ceased after the operation of the emetic, exhibited as prescribed in a preceding section. To prevent uneasiness and restlessness from griping, I seldom omit the addition of a few grains of ginger. In cases of known obstinate constipation, I have sometimes considered it useful to add a quarter or half a drop, and even more, when authorised by the age of the patient, of croton oil. At the commencement of the disease, I consider it a matter of great importance to obtain a state of perfect freedom of the bowels; which should include an early and an effectual removal of all scybalous accumulations. Another indication for the use of calomel is its remarkable competency, beyond all other known powers, to act vigorously as a cholagogue, or a purgative of the liver.* * * To ensure the brisk action of calomel as a cholagogue, it would be best, in most cases, to exhibit it pure, that is, without any combination with it, either of jalap or of any other active purgative. For this purpose calomel should be exhibited in doses of from one to three grains, every three hours.

"Nevertheless, the state of the bowels should not be forgotten as to freedom, and it may frequently require the exhibition of purgatives of great activity to ensure a sufficiently frequent evacuation of their contents. Connected with this method of exhibiting mercury in conformity with its several indications, we arrive speedily, in many cases, at our third indication for its use; that of exciting an action of the salivary glands with a view to the subduction of an inflammatory condition of the vessels of the head.* * * But calomel, therefore, in full doses, requires to be exhibited with great discretion and constant advertence to this specific and inconvenient property of the medicine. The few cases of recovery from acute hydrocephalus which we find recorded as having taken place in the absence of early bleeding, are, I think, principally, if not exclusively, to be attributed to this constitutional action of calomel as a resolvent of inflammatory action. But this power is rarely exerted to the extent of saving life: I never, myself, depend upon it; and, indeed, I seldom use it at all, in respondence to its assumed influence as a resolvent of inflammatory action, excepting as an auxiliary of the lancet, or as an almost hopeless substitute for its use, when considered too late to have recourse to adequate repeated abstractions of blood with any considerable hopes of a successful issue. On the whole, I look upon mercury, exhibited in conformity with this last indication for its use, a remedy of less value, as to its power over

the issues of hydrocephalus, than any of the other active measures which I have discussed."—pp. 271-75.

Such is an ample analysis of the treatment of acute hydrocephalus propounded in this work, which, taken altogether, will, if we be not deceived, produce a remarkable change in that department of the healing art to which the subject of it directly refers, and we shall be much mistaken if the results do not prove equally honourable to medical science and gratifying to the friends of humanity.

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## CHELTENHAM GENERAL HOSPITAL.

*Notes of Cases treated by* AUGUSTUS EVES, *Esq., Surgeon to the Hospital.*

### TRAUMATIC TETANUS.

IN THE LANCET of March 3, 1838, I published a case of tetanus, which terminated fatally within thirty hours from the commencement of the attack. In that case bleeding was employed (without my consent), and seemed decidedly to hasten the death. I there hinted at the analogy which appears to exist between tetanus and delirium tremens, and suggested the propriety of similar principles of treatment in both diseases. It was also stated that the seat of tetanus is in the spinal marrow; but it may be more correct to refer it, with Mr. Curling, to the tractus motorius, as some few cases are on record where tetanus has originated from direct injury or disease of the brain. The following case of traumatic tetanus was treated chiefly with reference to the principles to which I have alluded, together with the administration of croton oil, the action of which is not to be considered merely with regard to its purgative effect. We must also take into account its peculiar stimulant agency, by which it acts on the whole extent of the mucous lining of the digestive tube, proving beneficial also, probably on the principle of counter-irritation.

CASE.— —Vaughan, æt. 29, of intemperate habits, admitted April 5, with a large contused and lacerated wound on the outside of the foot, caused by a waggon-wheel passing over it; the ankle-joint exposed; capsular ligament not torn. He was in a state of intoxication when he received this injury on the preceding night; had remained unattended until brought to hospital this morning; an attempt was made to bring the wounded parts together, and some purgative medicine was administered.

23. The wounded parts soon put on a sloughing appearance; yeast poultices were used from about the third day, until all the diseased parts had separated; the wound was then dressed with the tincture of myrrh, and the granulations were exceedingly healthy. To-day a spasmodic action of the muscles of the neck and lower jaw, with great rigidity, developed itself; the jaws were first affected on the 19th, with slight stiffness, which he attributed to exposure to a current of cold air from an open window.

*Extract of hyoscyamus*;
*Camphor*, of each, 3ss;
*Muriate of morphia*, gr. iij. Divide into twelve pills, and let one be taken every four hours. Administer an injection of castor oil and turpentine immediately.

24. Tetanic affection much increased; can scarcely swallow; has a most anxious expression of countenance, and sweats profusely; speaks hastily; has considerable catching in respiration, with pain in his chest.

25. Symptoms more decided; trismus and episthotonos; paroxysms every five minutes; pulse small, above 120; tongue covered with a yellowish fur; sweats much; sleeps badly; abdominal muscles very tense. Repeat the injection, and let him have half a pint of Madeira daily.

*Camphor*, 3ss;
*Powder of acacia gum*;
*Sugar*, of each ℥ss;
*Tincture of opium*, 3ij;
*Water*, ℥vj. Let an ounce of the mixture be given every four hours.

26. Bowels not open; to have two drops of croton oil every four hours, until the bowels have acted, omitting the mixture for the present.

27. Bowels have acted seven times; spasms more frequent, and affecting the whole of the limbs; tongue furred.

30. The Madeira has been daily taken, with as much strong soup as could be swallowed. To-day he was affected with extreme exhaustion, so great as at one time he was thought dying; in fact, he appeared, and was believed to be, actually dead; ammonia was applied to the nostrils, which restored him. A draught containing a drachm of sulphuric æther, with half an ounce of camphor mixture, to be taken every four hours.

May 1. Slept better; tongue cleaner; pulse 90. Half an ounce of tartarised antimony ointment, containing half a drachm of croton oil, to be rubbed on the spine night and morning.

2. To have croton oil, and continue the æther mixture.

3. Bowels free; sleeps well; perspires much; miliary eruption about the forehead; muscles of the abdomen less rigid; opens the mouth better; wound improving; paroxysm once in about twelve hours; muscles of the back still sufficiently rigid to prevent the body from bending forward; he, therefore, lies on the back without being able to sit up.

8. Bowels open; pulse about 100.

14. Pulse 80; cannot yet bend the body forward; has a pustular eruption down the spine from the ointment. Continue the wine, with rich soup, and eggs beaten up with wine, &c. Croton oil.

16. Perspires greatly; has had dreams.

18. Pulse natural; sleeps well; opens his mouth well; wound granulating.

21. Able to get up; to have porter instead of wine; mixture once daily.

25. Made an out-patient; quite well, except the wound in the foot.

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NOLI ME TANGERE, CURED BY CHLORIDE OF ZINC.

John Townley, admitted December 16, 1840; ulceration affecting the left nostril and septum. Chloride of zinc one part, sulphate of lime two parts; mix. This was applied twice, a poultice being used to assist the separation of the sloughs. He also had the following medicine:—

*Blue pill;*
*Compound extract of colocynth;* each ℈ss.
*Croton oil*, two drops. Make into twelve pills, and let two be taken every night.

After the sloughs had separated, the parts completely healed; a considerable thickening and redness remained about the upper lip and nostrils, he was otherwise completely well; discharged. He was recommended a lotion, with prussic acid and liq. plumbi, and to keep his bowels regular with some aperient medicine; he continues well at this time, June 30.

A case of long-standing phagedenic ulcer on the arm, which had resisted every means of cure that had been tried, completely healed after two applications of the chloride of zinc and gypsum, applied as in the last-mentioned case.

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EXCISION OF THE EYE.

Many very serious accidents have been brought into the hospital lately, occurring on the railroads in progress in this neighbourhood. A curious case was admitted May 1.

James Mathews, ætat 27, was brought in with the globe of the eye completely protruded from the orbit. The accident happened from his head being jammed between two carriages running on the railroad, from one of which an iron plate projected. The eye was removed by dividing the muscles and optic nerve. The nerve was divided at the point where it pierces the sclerotica; the globe was removed quite entire, and the patient did well.

STRANGULATED FEMORAL HERNIA—OPERATION—DEATH.

The following case may be worth recording, on account of the peculiarities which appeared during the operation, and likewise to show that a great extent of mischief may exist in the intestine, with but few symptoms indicative thereof.

May 3, 1840.— —— Male, about 50 years of age, admitted with femoral hernia, which had been strangulated about thirty hours. A surgeon had tried various means of reduction; there had been pain and sickness, which had left him after very free venesection; so that when brought to the hospital the symptoms did not appear urgent; there was neither pain nor sickness, but the hernia could not be returned. Considering, from the history of the case, that the symptoms were only removed for a time by the bleeding, the operation was determined upon, and immediately performed. After dividing the integuments and superficial fascia, the fascia propria was brought into view. This was of so great a thickness, as to give the hernial tumour a glandular appearance, and I was doubtful whether any intestine would be found; but, by cautiously dividing this thickened structure, a very small knuckle of intestine was discovered, situated very deeply, and of a *very dark colour*. The stricture, which was exceedingly tense, was divided inwards; the intestine was immediately returned; hæmorrhage came on in the night, which was stopped by the house-surgeon by pressure.

4. Found he had lost a considerable quantity of blood. On removing the bandages the bleeding returned freely. Opened the wound, and tied two bleeding points, which effectually stopped the hæmorrhage.

*Infusion of roses*, ℥j;
*Epsom salts*, ℈jss. To be taken every four hours.

5. Bowels have acted slightly; abdomen tense and painful; sickness. Calomel and opium; injection of castor oil; turpentine and gruel; fomentations.

6. Worse; no motion; sickness; brown tongue; sinking appearance. Effervescing draught, with two drachms of brandy occasionally.

He died the next day.

*Post-mortem Examination.*—There was much ecchymosis from the pressure. The intestines were *generally* healthy. Effusion of lymph, among the convolutions, in small quantities; effusion of serum into the cavity of the abdomen. The strictured part of the intestine was found in a state of incipient gangrene, and the mucous membrane around it was intensely red; the vessels of the surrounding parts of the intestine much congested.

THE

## DUBLIN APOTHECARIES' HALL

VERSUS

## AN UNLICENSED APOTHECARY.

ONE of those actions has been recently tried in Ireland of which the "unlicensed" apothecaries of that country have lately been complaining to Parliament. It took place on the 22nd of July, at Clonmel, in the Record Court, during the Tipperary South-Riding Assizes, before Mr. Justice PERRIN, and ended in a verdict against the defendant. The defendant had been in practice as a "medical man" for more than twenty years, and was prosecuted by the Governor and Company of the Apothecaries' Hall, Dublin, for the recovery of a double penalty; one for practising, and the other for opening and trading in a shop, as an apothecary.

Mr. WALL commenced the proceedings, after which another counsel for the plaintiffs,

Mr. HATCHELL, rose and said,—The action is brought under the 4th of Geo. III. c. 35, to recover, if possible, two penalties; or, if not successful in obtaining a verdict for two, then for one penalty. It having been reported to the Governor and Company that Mr. Mahony had practised as an apothecary in an open shop in Clogheen, the defendant was served with a *capias* to show that he had passed the Hall. He failed to do so, and this action was brought. You may be told that this is a very penal act, but it is most requisite for the preservation of the health of her Majesty's subjects.

*John Ryan* proved that he had purchased from the defendant, in his shop, a box of pills for a shilling.

*Joseph Clarke.*—I am a surgeon and apothecary; the paper handed to me is a prescription; it was given to the last witness, who presented it to Mahony at his shop, and brought back a box of pills; I know the defendant; I have seen him compound medicine frequently in his shop.

*Cross-examined.*—I am duly licensed; I came to Clogheen from Dublin, some weeks ago; I was in Dublin *steadying*.

What do you mean by *steadying*? To what fortunate circumstance is Clogheen indebted for your residence there?

I came down there to practise.

You are, I believe, an amateur informer. What did you see Mr. Mahony compound?

I can't say what particular medicine.

Is not whisky compounded as medicine, and brandy also?—Yes.

Is there not a formula for compounding London punch? Read that prescription in your hand.

The jury won't understand it. Am I bound to read it, my Lord?

The Court.—I believe not.

Mr. Martley.—Then the registrar must read it.

Witness.—Good classical scholars can't read such prescriptions.

Mr. Martley.—So the better Latin scholar a man is, the worse able he is to read it. Where did you learn *your* Latin? I am anxious to know all about you.

Witness.—I served part of my time in Coote Hill, and the remainder in Dublin. It was I that gave the information to the Apothecaries' Hall about Mr. Mahony. It was not to get rid of a rival. I don't consider a man a rival practitioner who is not regularly licensed. I did not touch, taste, or smell the medicine I saw Mr. Mahony compound, but I know it was not water.

Mr. Martley.—Is not water the most profitable drug you vend?

Witness refused to answer until directed to do so by his Lordship. He then said he didn't know.

The Court.—It is the most wholesome drink he has to sell.

Mr. Martley.—Don't you sell white sugar, and lemons, and water, aqua distillata?

Yes.

*Dr. Gallogly* came on the table, but before he would be sworn he insisted on getting two pounds expenses. The prescription was his, for a Mr. Jellico, a patient. A box of pills was got from Mr. Mahony by direction of that prescription. Twelve.

Just one each for the Jury, the Counsel added.

I am medical attendant at the Dispensary of Clogheen, and the defendant compounded medicine there for me at my request.

To the Court.—He has always compounded medicine very correctly. I have had great satisfaction with him. If I wanted medicine for myself, I would send to Mr. Mahony in preference to any apothecary in Clogheen.

*Mr. Edward Price.*—The defendant has lived next door to me in Clogheen since the year 1825; he keeps an apothecary's shop; I recently took some of his pills; I was most anxious to get Dr. Clarke to Clogheen; I had a slight falling out with Mr. Mahony; I am no friend of his, though I would not injure him; I have been tried in this court, and sentenced to six weeks' imprisonment.

*David Hickey.*—Mr. Mahony has kept an apothecary's shop, and has attended me and my family as an apothecary, within the last twelve months.

*Mr. George.*—We have served a notice on the defendant to produce the certificate he got, if any, to become an apprentice; and also his certificate, if any, to open shop and practise as an apothecary.

Do you produce these, Mr. Martley?

Mr. Martley made no answer.

*Mr. Joice.*—I am clerk in the Apothecaries' Hall, Dublin. I hold their books in my hand. There is an entry in them to this

effect:—"Brien Mahony, Bruff, Limerick, obtained his certificate in August, 1824, to serve his time as an apothecary." There is also another entry:—"Brien Mahony, Bruff, Limerick, licence granted, and dated 1st June, 1832." There is no other Brien Mahony on the books. Every lad coming for examination must enter his name in a book, and also on a printed paper, and if he be rejected, it is so written on the paper.

Have you ever known lads in college to go in and pass for others?

I have heard of such a thing; but I was never privy to it. A person, when licensed, has a certificate given to him, with the Hall seal on it. According to the book, Mr. Brien Mahony did not get his license to practice until the year 1832.

*Mr. M'Gill*, an apothecary's assistant, stated that he came from King-town, near Dublin, and was a licentiate apothecary; he demanded £10 as his expenses.

The agent for the prosecution said that sum was too much for an assistant.

The witness said that his salary was only nominal, and he was allowed fees.

What fees in a week?

I often get a guinea for *bleeding* alone.

Mr. Hatchell.—You are a regular *leech*.

Being allowed £8 expenses, he deposed that he knew O'Brien Mahony very well in Clonmel.

*Surgeon O'Brien Mahony.*—I lived near Bruff in 1824; I got a certificate as licentiate apothecary when out of my time; the entry in the book produced is correct; I used to write "Brien Mahony," and also "O'Brien Mahony," when a boy. My name is written in the book, "Brien Mahony."

*Mr. Lonergan.*—As legal adviser to the defendant, I wrote in answer to an intimation of this action to the Governor of the Apothecaries' Hall, stating that the defendant was a regular licensed apothecary, and that his certificate was in my hands, and might be seen by the company.

The case for the prosecution here closed.

Mr. BREWSTER then designated the present action as a most harsh, virulent, and malicious proceeding. Apothecary Clarke (he said) came down, specially, to physic the people of Clogheen. What is his motive in taking a part in this prosecution? He thought the best way to ensure his object was to ruin a rival. How came that prescription of Dr. Gallogly into the possession of this apothecary? Gentlemen, you have no evidence that these pills were prepared by Mr. Mahony, and you must taste them before you can give a verdict on them. Clarke did not prove that Mr. Mahony compounded medicine, although he took an occasional peep through the window when Mr. Mahony was engaged in some affair or other. The law is, that you must be perfectly satisfied that within twelve months Mr. Mahony did compound some drugs and vend them; and though Clarke proves that, through the window, he saw him compound something, yet he could not tell what. He may have been mixing colouring stuff to fill one of those bottles which shine so conspicuously at night. Gentlemen, this prosecution is altogether unworthy of the Apothecaries' Hall. Selling medicines is no breach of the law. It is perfectly legal to sell medicines, and there is scarcely any respectable shop but is filled with them,—Gregory's powders, George's powders, and Morison's pills; and yet traders in those articles do not invade the privileges of the Apothecaries' Hall, or call down its vengeance. If Mr. Mahony practised the art of an apothecary in Clogheen, could not a hundred persons in that town prove it, without bringing down Mr. Clarke to do so? Gentlemen, you are called upon to establish Clarke in Clogheen, but I hope you will have more mercy on the people than to do so. I will admit that if an unlettered quack set up an apothecary's shop, it would be right for the Apothecaries' Hall to interfere; but where a respectable person has been honourably practising his profession for twenty years, it is most harassing and unjust to prevent him from doing so, and actually ruin him. But, from the manner in which the books of the Apothecaries' Hall are kept, and the loose proof they can give of the qualification of apothecaries, it is impossible for you to say now, after twenty years, that Mr. Mahony is not regularly licensed. Frequently persons pass the Hall who represent others, but there is no proof that Mr. Mahony is not a licensed apothecary, or that he is not perfectly competent to practise his profession. It is too much to call on him *now* to produce his certificate, which, after such a lapse of time, might have been lost or mislaid. Why, twenty years would qualify a person to discharge *any* business. You might retain possession of all the land in Tipperary if you had had it for twenty years. If any complaint had been made to the Hall of unskilful practice on our part, that might give some reason for a prosecution; but I trust you will not take part with the Hall in their attempt to ruin this respectable man.

His Lordship then charged the jury. He said, the learned counsel has spoken strongly of the motives of the Hall; but with those things we have no concern. You have only to say whether the prosecutors have established the facts which it was necessary for them to prove, and to administer justice according to law. Has the defendant transgressed the law within the last year, by opening a shop for the retail of medicines, and practising as an apothecary within that time. Though he had done so before that period, it can be no evidence in this case, for the law says, "within one year, without having a license so to do," he having placed his name, Brien Mahony, over the door, to

show that he practised as an apothecary. Mr. Brewster was quite right in saying that the pills were not proved to have come direct from the shop of Mr. Mahony. There is no direct evidence that the pill-box produced is the box that was given to the witness. Nor have you any evidence that the pills were injudiciously made up, or not, according to the prescription. It appears that he did practise as an apothecary at some previous period. Dr. Gallogly says, that the defendant had compounded medicine for him in the dispensary of Clogheen, but you have no evidence that he has done so within the past year. You have it from Mr. Price that defendant lived next door to him, and kept an apothecary's shop. Hickey also proved that the defendant has had an apothecary's shop in Clogheen within the last year, and that he sold medicines within that period, and also proved that, within a year, the defendant has attended his family, and sold medicines to him. If you believe this evidence, you must conclude that the defendant did so within a year, but you must be satisfied that he did so without being duly licensed so to do. Mr. Joice shows that a Brien Mahony was examined in June, 1822, and had a certificate previously procured of his apprenticeship. But Surgeon Mahony proved that *he* was the person whose name appeared in the book, and that he resides in Clonmel. Mr. Lonergan stated that the defendant's diploma was in his possession, and could be shown to the Hall, if required. But this certificate has not been produced. It is a very just supposition, that, as Mr. Mahony has been practising for over 20 years, he was qualified to do so; but has he a certificate or not? You are not to look at the motive in bringing this action, but, according as you find that he has trangressed in one or in two instances, so you will find a verdict for one, or two, penalties of £20 each.

The jury returned a verdict for two penalties of £20 (Irish) each, and 6d. costs.

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## BRITISH MEDICAL ASSOCIATION.

### SPECIAL MEETING OF COUNCIL.

*Exeter Hall, July the 28th, 1840.*

Dr. Webster in the chair.

The President laid before the Meeting a Report from the Deputation which had attended the late meeting of the Provincial Association, at Southampton; after the reading of which it was resolved, unanimously, "That the Report be received and adopted," and that the best thanks of the Council are due, and are hereby given, to Dr. Webster and Dr. Grant, for their sacrifice of time in attending as the deputation, and for the able Report now presented to the Council.

The President then returned thanks for the honour thus paid to his colleague and himself.

It was afterwards resolved, "That the 'heads of a bill,' contained in the Report, be referred, when desirable, to the Reform Committee of the Association."

The Meeting then adjourned.

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*Deputation from the Council to Southampton, July 22nd and 23rd, 1840.*

The deputation consisted of Dr. Webster and Professor Grant. Their duties were to represent the Council at the Meeting of the Provincial Medical Association, and confer there with a Committee of that Association and Deputations from the Irish and North of England Medical Associations, on the subject of Medical Reform. Dr. Marshall Hall and Dr. Webster attended a similar meeting at Liverpool, last year. On that occasion (the Report proceeds) the Provincial Association agreed, for the first time, to petition Parliament for a measure of Medical Reform, which should alone affect the education and privileges of the profession, *but not its government*; that a Reform Committee was appointed, with Dr. Barlow, of Bath, for its chairman, who, with Professor Maunsell and Dr. Webster, should be the organs of communication of their respective Associations, and should correspond with each other, and with other Associations, so as to promote the cause of Reform, and should draw up heads of a bill to be introduced into Parliament. Since that time several new Associations in England and Scotland have been formed, on the same principles and for the same purposes as the British Medical Association, viz., to procure salutary and necessary reforms in the profession.

On the 20th of July inst., a private meeting of Reformers was held in London, at which were present Mr. Carmichael and Professor Maunsell, of Dublin; Mr. Carter, of Newcastle; Dr. Bedingfield, of Stowmarket; Professor Grant, Dr. Webster, Mr. Farr, and two other influential members of the profession, when the question of Medical Reform was freely discussed, and its present position and the steps necessary to be taken were duly considered.

On the 22nd, your deputation proceeded to Southampton, and previous to the general meeting the following gentlemen met, viz., Dr. Barlow, of Bath; Dr. Forbes, of Chichester; and Dr. Cowan, of Reading, of the Provincial Association;—Mr. Carter, of Newcastle, from the North of England Association; Mr. Carmichael and Professor Maunsell, from the Irish Association; and Professor Grant, Dr. Webster, and Mr. Farr, from the British Medical Association; when Dr. Barlow read his Report of the Reform Committee, and the motion he meant to recommend thereon.

It is unnecessary here to advert to the part which Dr. Webster took, as a member of the Provincial Association, in moving that Mr. Wakley's name should be introduced into the Report of the Council in connection with the Vaccination-Extension and Small-pox Prevention Bills, which ended in a separate vote of thanks to that gentleman, nor to his having moved the adoption of the Poor-Law Report and its recommendations.

On the Report of Dr. Barlow, on Medical Reform, being called for, your deputation and the other deputations were introduced to the meeting by Dr. Hastings, the secretary; and the deputations were invited to take part in the discussion, and to state their opinions.

Unfortunately at this period Dr. Grant was obliged to proceed to London, which deprived your President of his able and valuable assistance.

Dr. Barlow read the report, which was similar in substance to that of last year, recommending a "sound legal constitution" for the profession, uniformity of qualification, and the establishment of three examining boards in London, Edinburgh, and Dublin, to admit all future candidates for practice, and which should supersede the present eighteen or nineteen licensing bodies. The Report stated, that when a sufficient number of duly-qualified members were admitted, the necessary consequence would be (in the course of years) that a better government for the profession would result, or be obtained, but that the two subjects the *education* and *government* of the profession should be kept perfectly distinct, and that it would be unwise to mix them up, or ask for the two at once. This Report, which was seconded in an excellent speech from Mr. Carter, of Newcastle, was adopted, and the reappointment of a Reform Committee, with ampler powers, then took place. Mr. Carmichael, in an able speech, advocated the importance, as Mr. Carter had done before him, of obtaining a thorough reform in the *government* as well as in the education of the profession, founded on the representative principle.

Dr. Webster then addressed the meeting at some length, and contended that, though he generally concurred in Dr. Barlow's excellent Report, yet he thought that we ought not to rest satisfied with a mere educational reform, but should strenuously endeavour to obtain at the same time a government for the profession founded on the representative system, the only solid and sound basis of all good governments. He considered that so far from its being desirable that the education and qualification of the future profession should be kept distinct from the government, the two subjects were naturally and intimately connected, that a Representative Council, elected by the profession, and connected in some mode with the government, which should act on behalf of the public, would be the proper body to which to refer all such matters, and to carry out the improvements which Dr. Barlow and this Association and all the other Associations contemplated. He opposed the idea of waiting till a new mode of qualification should have furnished a sufficient number of electors to form a new government for the profession, as he was sure there already existed not only a highly-qualified body of electors in the present legally-constituted members of the profession, but also many enlightened gentlemen to form an Executive Council. Dr. Webster then glanced at the present state of the profession, and insisted that homœopathy and the numerous quackeries of the day, and the injurious effects of the Poor-Law on the public and on medical men, would have been crushed in the bud had there been a Representative Faculty of Medicine. He regretted to say, that he feared Mr. Warburton's proposed measure (if ever introduced) would, from what the Honourable Member had stated to a deputation of the British Medical Association, neither protect the public from ignorance and imposture, nor satisfy the just and moderate expectations of the profession. He, therefore, looked to public opinion and to the united efforts and the moral strength of the many Associations which now exist, to effect that which had been so long neglected by legislators and the Government; and he trusted that the Provincial Association would honestly and manfully assist in working out the salutary reforms so much needed in the profession, but much more as regarded the public health. He hoped that this Association would go one step beyond a mere educational reform, and recognise the necessity of a Representative Government, which, having been first adopted by the British Medical Association, had been since followed by all the other great Associations in England, Scotland, and Ireland; it required only that the Provincial Association should unite with the others on this head, and a degree of union as to Medical Reform would then be effected, such as had never yet existed. In Dr. Barlow's report it was stated, that 89 petitions, with upwards of 3000 signatures, had been presented to Parliament, up to a certain day in June, all praying for Medical Reform; but he was happy to say, that they now amounted to 130 petitions, and 4321 signatures, most of them praying for a National Faculty of Medicine, and none of them opposing it. This was highly encouraging, and though he believed that Dr. Barlow's Report in reality did recognise the representative principle, and he knew that the doctor, at all events, looked forward to its operation, still as doubts existed on the subject out of the Association, it was important at the present

time that it should be specifically and distinctly stated at this meeting, and he should with this view move the following resolution:—

"That it is highly important that the Provincial Medical Association should further the steps now being taken for promoting Medical Reform, on the principles of an uniform *test* of qualification, and a representative system of government."

Mr. CARMICHAEL rose to second the motion, but gave way to Dr. BARLOW, who said that he would with pleasure second the resolution, to show that there existed between him and his friend Dr. Webster, and his associates from the other Societies, no difference of opinion on the great principles of Medical Reform. If it were supposed that he was averse to the representative plan of government, nothing could be a greater mistake. The only difference was as to the time when it ought to be brought into operation. He considered if an uniform qualification, and one legal mode of entering the profession were established, that a representative system of government must necessarily follow; but he was not so wedded to his own opinion as to be thought a barrier to any plan of improvement. He thought that by asking for too many things at once, we had a less chance of succeeding than if we asked for one branch of reform in the first instance, viz., the educational, which he looked to as the proper basis for all others. In the hope, however, that we might obtain a government as well as an educational reform, he should cordially support Dr. Webster's motion, which was then put and carried amidst loud applause.

It was then suggested, that as the members of the different deputations might not soon have so convenient an opportunity of conferring together, they should meet early next morning, and arrange a plan for future operations. Accordingly a meeting of the joint-committee of the Association took place on Thursday morning, the 23rd; present, Dr. Barlow in the chair.

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| Mr. Carmichael. | Dr. Cowan. |
| Dr. Webster. | Dr. Maunsell. |
| Mr. Carter. | Mr. Farr. |
| Dr. Forbes. | |

When the following resolutions were passed unanimously:—

1st. That Doctors Barlow, Webster and Maunsell, and Mr. Carter, be the organs of communication of the several councils.

2nd. That a deputation wait upon Mr. Warburton to ascertain his intentions with regard to a measure of Medical Reform.

3rd. That if it be ascertained that Mr. Warburton does not mean to introduce a bill this session, this committee shall forthwith proceed to draw up heads of a measure for the regulation of the Medical Profession, and endeavour to procure the introduction of a bill founded thereon during the next session of Parliament.

Thereafter Dr. Webster, having read the preamble and heads of a bill, resolved,

4th. That Dr. Webster be requested to get the same printed and circulated among the members of this committee for their consideration.

INTERVIEW WITH MR. WARBURTON.

It may be as well to state here the result of the deputation to Mr. Warburton, which took place on Saturday, the 25th of July, and consisted of Messrs. Carmichael and Carter, and Doctors Maunsell and Cowan, both members of your deputation, being unable to attend.

Mr. Warburton received them courteously, and explained that he fully meant to introduce his bill this session, though only with the intention of having it printed, so as to be made known and considered during the recess, and then discussed in the House early next session. The provisions of the bill are, that there should be a council in each metropolis, partly elected by the profession, partly appointed by government; and that there should be a proportion of gentlemen not of the profession in their councils, to be appointed also by government. The Councils to elect examiners, and have the power of licensing to practise along with the existing college and licensing bodies, which are to be allowed to retain all their present rights.

There are to be no provisions for preventing grocers, chemists, druggists, or empirics, from tampering with the public health, and interfering with the regular practitioners. Mr. Warburton expects that his scheme will induce men to seek a superior degree from the proposed new licensing body, and that their reform will gradually take place; but he very truly added, *that he believed his bill would not give satisfaction to any party!* To this the deputation responded, by assuring him they entirely agreed in this belief, and that they considered his scheme would prove totally inefficient; and though they might be disposed to take it as an instalment, they could not rest contented with it. They believed also that his imperfect measure would excite quite as much opposition as one founded on the much broader basis of justice to the public and the profession.

In conclusion, it is certainly matter of sincere congratulation that the deputations at their different meetings, and at the public meeting at Southampton, should have acted with so much unanimity and zeal in the cause of reform, and that a plan of operations has been entered upon which there cannot be a doubt will lead to success. That so much has been already effected in organising the profession is also highly satisfactory and encouraging; and as the cause is not that of medical men alone, but much

more that of the public, as their dearest interests are so deeply involved, it is to be hoped they will see the importance of assisting them (by petition and otherwise), in their just and laudable endeavours to render the profession more respectable among themselves, and much more useful to society.

George Webster.

Dulwich, July 28, 1840.

## REPLY FROM MR. HOULTON.

*To the Editor of* The Lancet.

Sir:—Dr. Sigmond appears to have been offended by the questions that I put to him in my last, and declines all further notice of me. I was not aware that my letters were expressed in offensive terms; and if they contained any flagrant errors, it would have been very easy for a man of Dr. Sigmond's talent to expose them, in a clear and conclusive manner. Had he been inclined to be more communicative, I might have asked him some questions about the cat and the marsh-pools in his paper on odoriferous bodies; but I shall not run the risk of making him uncomfortable by so doing.

Dr. Sigmond may believe that the papers in the "Amœnitates Academicæ" are the genuine works of the pupils of Linnæus, if he please. He may ascribe to Wahlin the classification of the odoriferous plants if he like, and use the word *postulatums* in any sense he may think proper. The whole of the matter is, that we do not think alike on these subjects. I have one more remark to make. Dr. Sigmond states, that he did not call an aphorism a *postulatum*: I shall quote his own words—"One of the postulatums of Linnæus was, that the qualities of medicines are, in a general way, to be determined by their effects on the organs of smell and of taste, which is substantially the 358th aphorism in the 'Philosophia Botanica' of Linnæus."

It is not likely that I shall trouble Dr. Sigmond any more, and to him I would say, in the words of his College, "Precor tibi omnia fausta." I am, Sir, your obedient servant,

Joseph Houlton.

London, Aug. 10, 1840.

## LIBRARY OF PRACTICAL MEDICINE.

*To the Editor of* The Lancet.

Sir:—In a critical notice of the "Library of Practical Medicine," which appeared in your last Number, your reviewer states, that the article on Croup, of which I am the writer, is a mere abridgment of the article on the same subject in Dr. Copland's "Dictionary," and that without acknowledgment. Plagiarism is an offence so reprehensible, that I feel myself bound to exonerate myself from a charge which seems to have been founded on an oversight.

In writing the history of Croup, I consulted the works of many preceding writers, and finding the descriptions of Dr. Cheyne and Dr. Copland most to correspond with the results of my own observation, I adopted them in a few instances, not, however, without premising that "in the history of the usual forms of the progress of the disease, we shall often avail ourselves of the descriptions given by the latest writers, Dr. Cheyne and Dr. Copland." (I quote from my MS., not having a printed copy of the work.) In another place it is said, "The curative indications in croup are well stated by Dr. Copland," &c. So far as I know, in every other instance I have quoted the name of this distinguished writer when I have used his words or his views.

Writers, faithfully describing the same subject, might correspond in opinion, and even in expression, without justly incurring the charge of plagiarism; but it happens in this instance, that there is, on many points, a difference of opinion between Dr. Copland and myself; and if your reviewer had carefully read my brief essay, he would have perceived, that on the pathology and in the details of diagnosis and practice, there is by no means a unity of sentiment between us. I have the honour to be, Sir, your most obedient servant,

C. J. B. Williams.

Holles-street, Cavendish-square,
Aug. 8, 1840.

Dr. Colledge.—"Thomas R. Colledge, M.D., of her Majesty's establishment, Canton, China, was, on Tuesday last, elected a non-resident Fellow of the Royal College of Physicians of Edinburgh."—*Edinburgh Evening Courant.*

Dr. Colledge was the first European to extend medical aid to the Chinese, by founding an institution in which they might receive gratuitous assistance. In 1828, he established an ophthalmic hospital for the Chinese in Macao, which subsequently became a hospital for seamen of all nations. More recently, induced by his exertions, the Medical Philanthropic Society founded two hospitals expressly for the Chinese, one at Macao, the other at Canton.

## TO CORRESPONDENTS.

*M. T.*—A moderate diet, of the simplest food, on teetotal principles, open air, plenty of exercise, early hours, wholesome occupation of the mind, attention to the bowels.

*Wm. Bennett.*—The time is short, the process simple, the eye itself untouched.